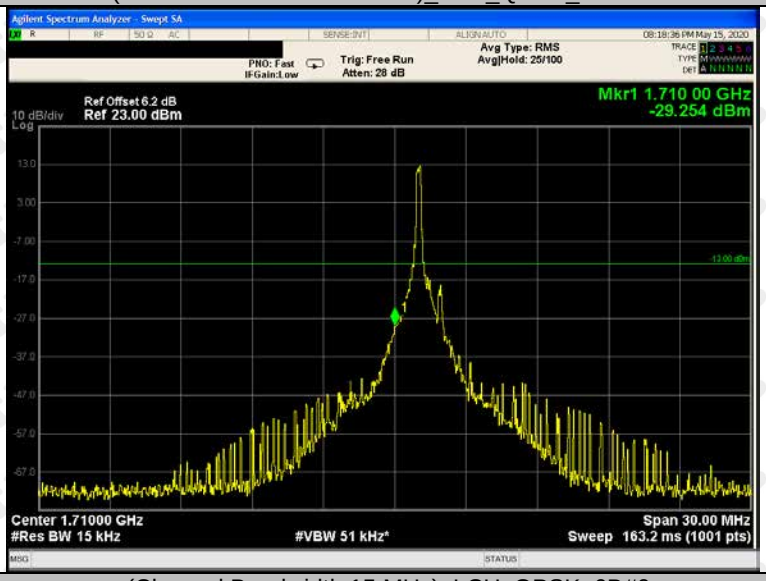
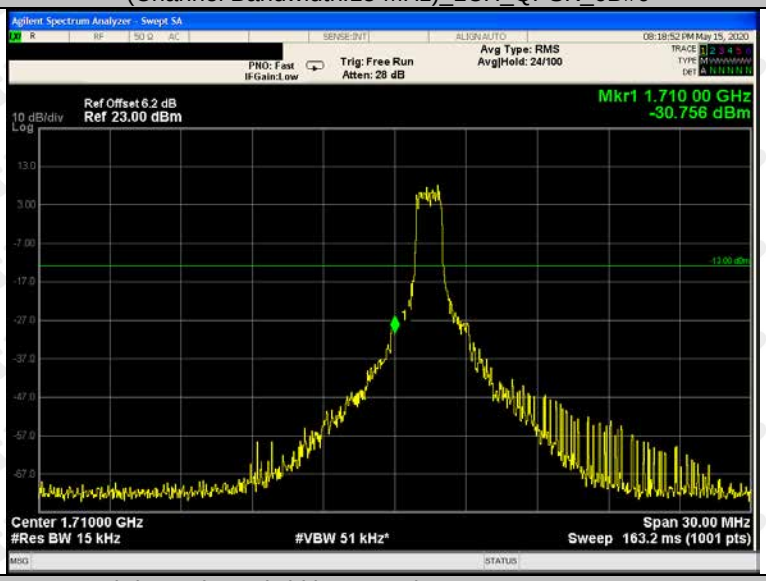
Channel Bandwidth: 15 MHz

(Channel Bandwidth:15 MHz)_LCH_QPSK_1RB#0

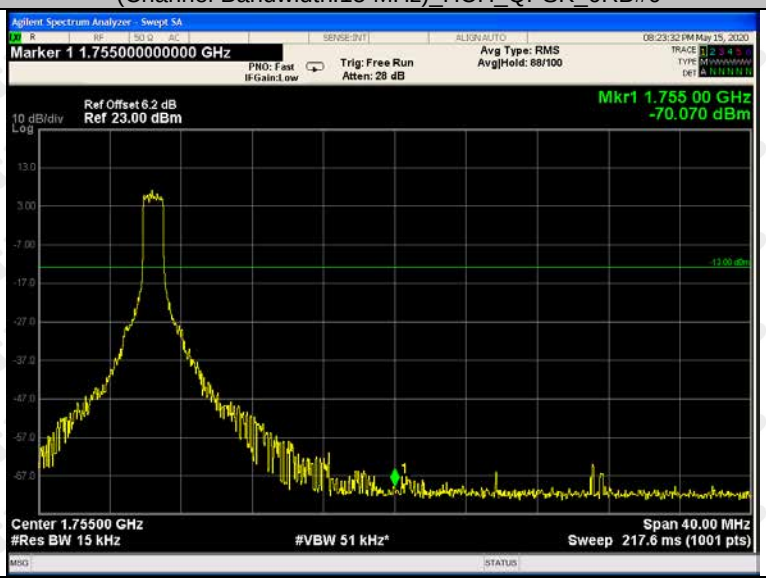


(Channel Bandwidth:15 MHz)_LCH_QPSK_6B#0

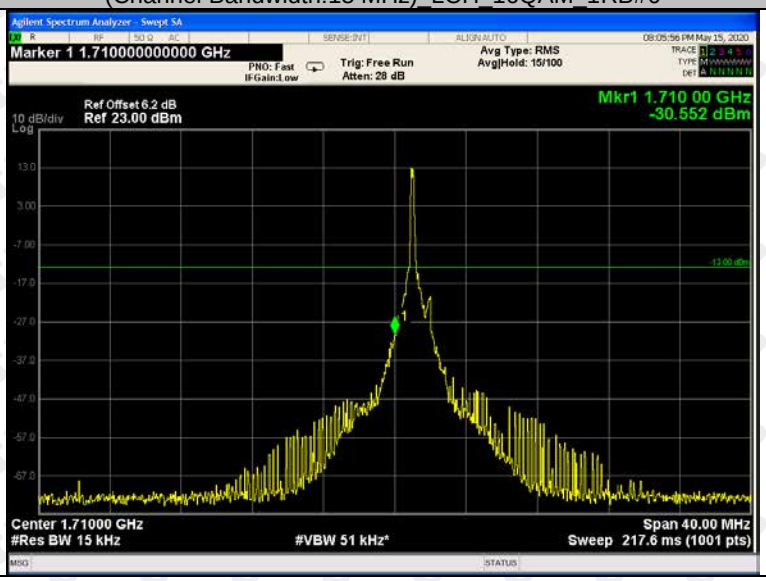


(Channel Bandwidth:15 MHz)_HCH_QPSK_1RB#0

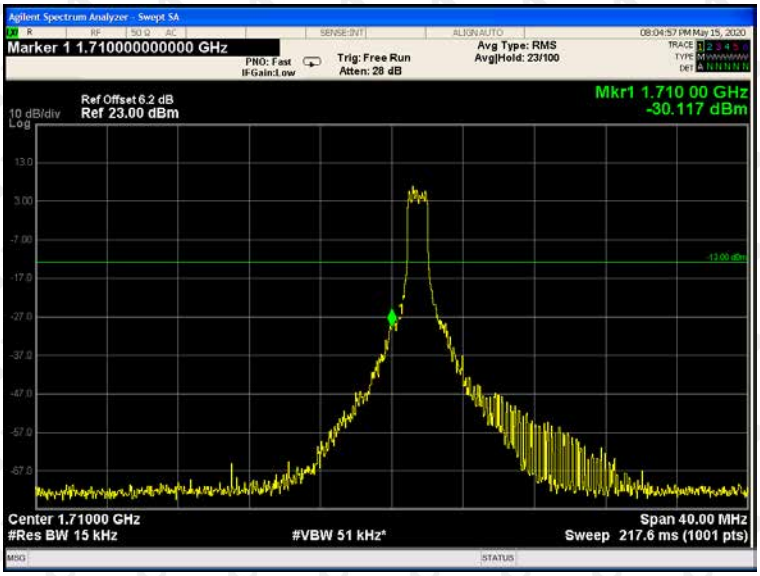
(Channel Bandwidth:15 MHz)_HCH_QPSK_6RB#0



(Channel Bandwidth:15 MHz)_LCH_16QAM_1RB#0



(Channel Bandwidth:15 MHz)_LCH_16QAM_5RB#0



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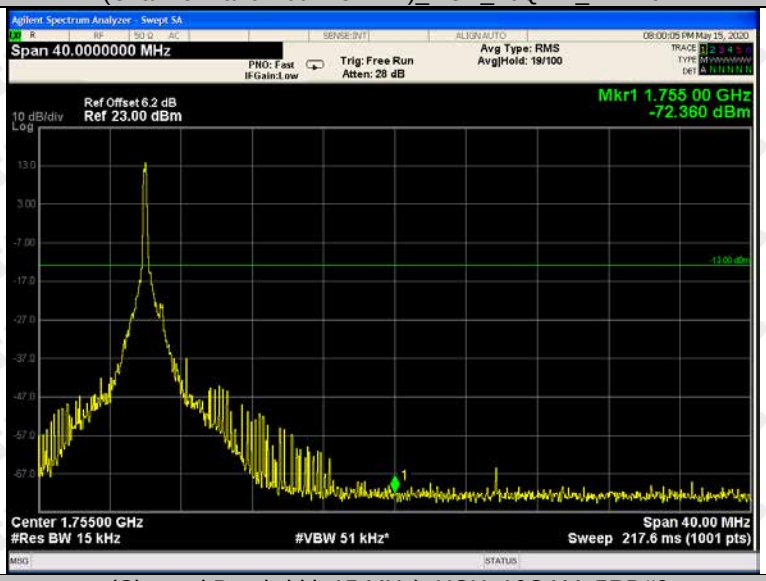
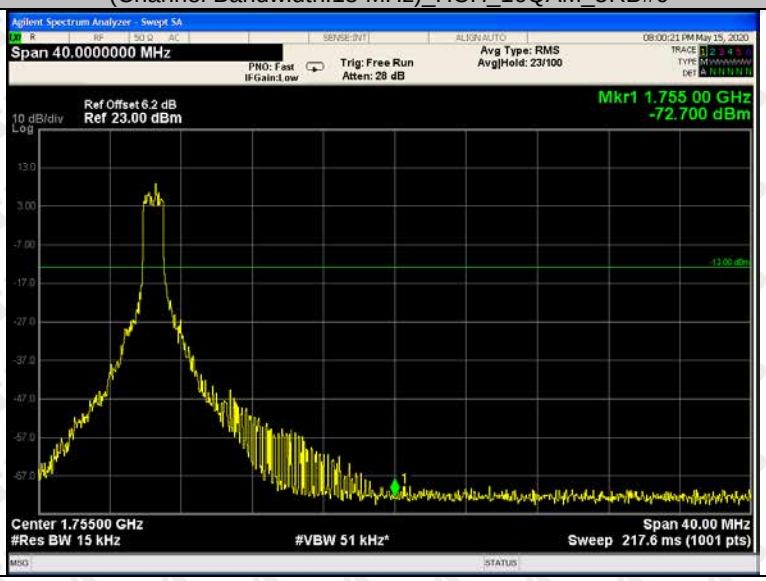
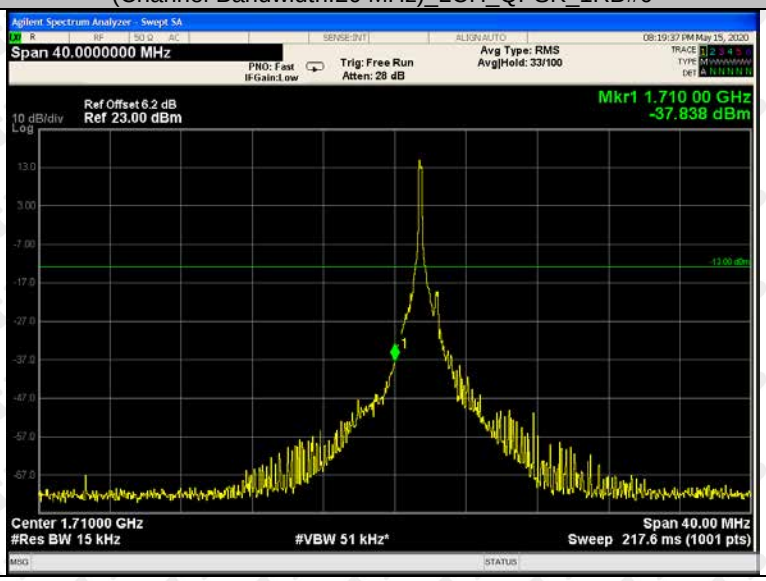


(Channel Bandwidth:15 MHz)_HCH_16QAM_5RB#0

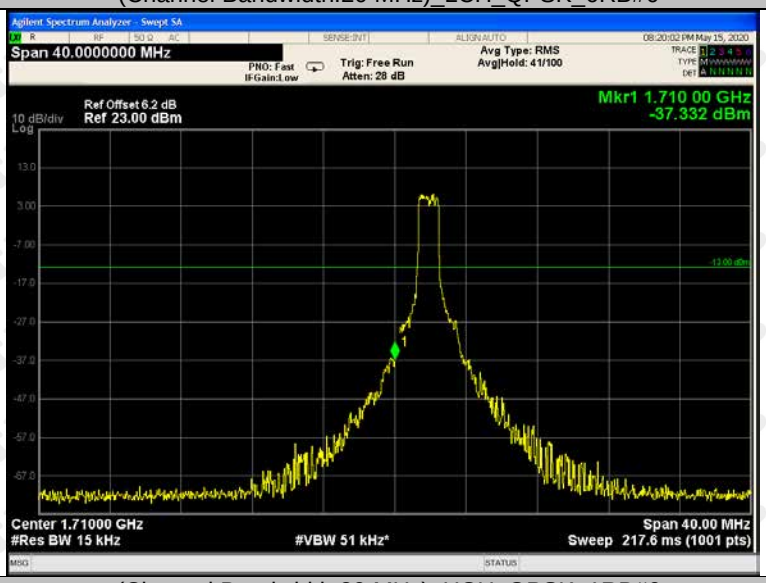


Channel Bandwidth: 20 MHz

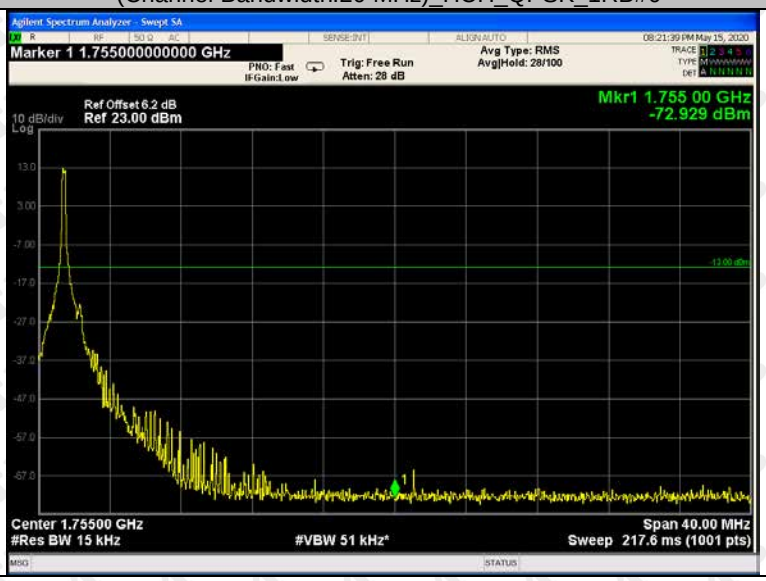
(Channel Bandwidth:20 MHz)_LCH_QPSK_1RB#0



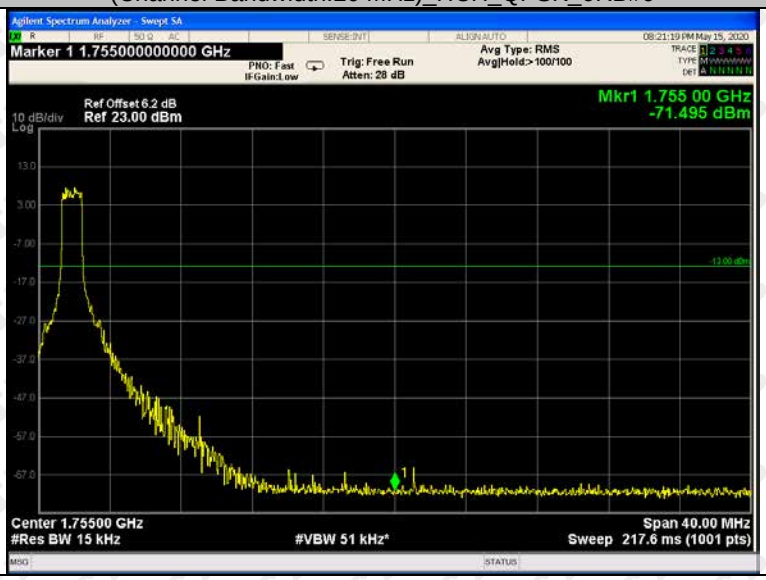
(Channel Bandwidth:20 MHz)_LCH_QPSK_6RB#0



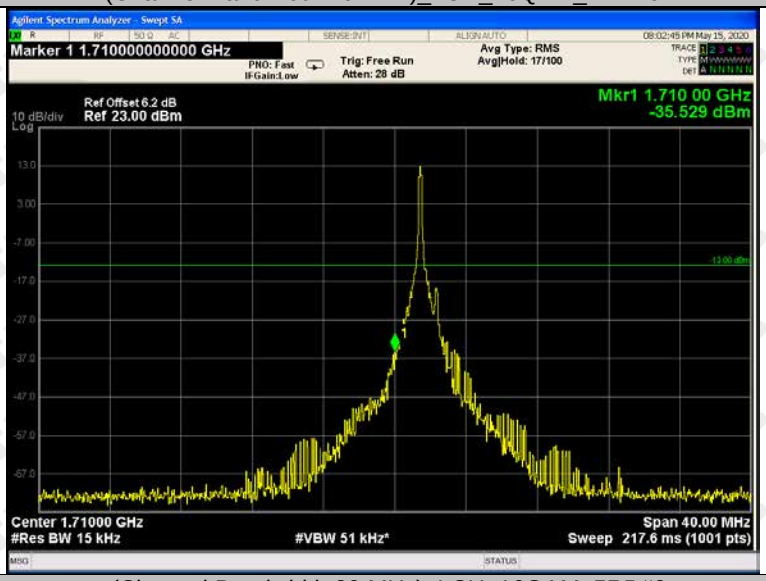
(Channel Bandwidth:20 MHz)_HCH_QPSK_1RB#0



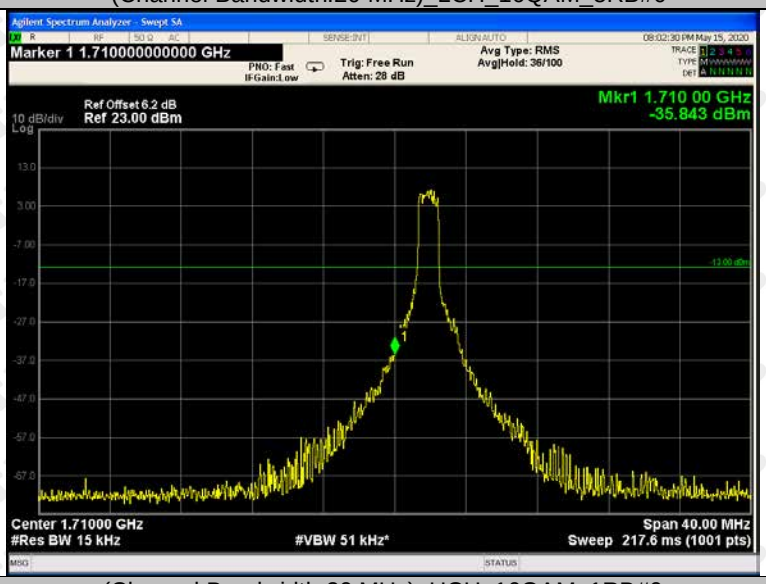
(Channel Bandwidth:20 MHz)_HCH_QPSK_6RB#0



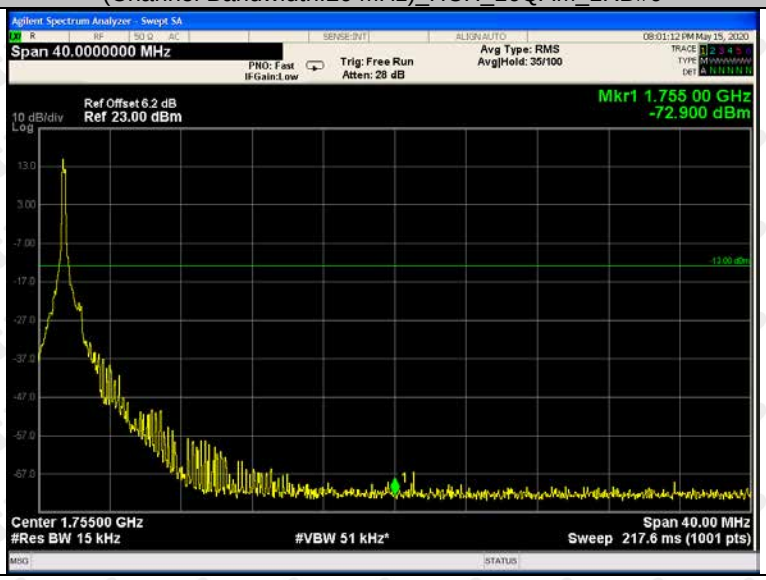
(Channel Bandwidth:20 MHz)_LCH_16QAM_1RB#0



(Channel Bandwidth:20 MHz)_LCH_16QAM_5RB#0



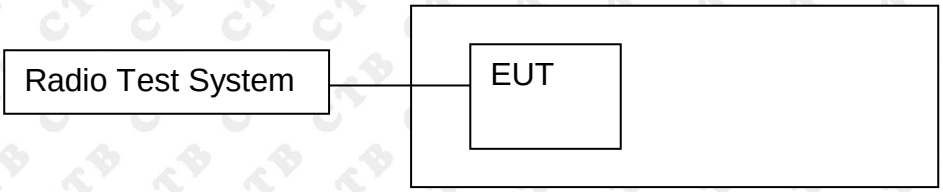
(Channel Bandwidth:20 MHz)_HCH_16QAM_1RB#0



(Channel Bandwidth:20 MHz)_HCH_16QAM_5RB#0

11. SPURIOUS EMISSIONS AT ANTENNA TERMINALS

11.1 Block Diagram Of Test Setup



11.2 Limit

(4) For mobile digital stations, the attenuation factor shall be not less than 40 + 10 log (P) dB on all frequencies between the channel edge and 5 megahertz from the channel edge, 43 + 10 log (P) dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that 43 + 10 log (P) dB on all frequencies between 2490.5 MHz and 2496 MHz and 55 + 10 log (P) dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

Limit	-13 dBm

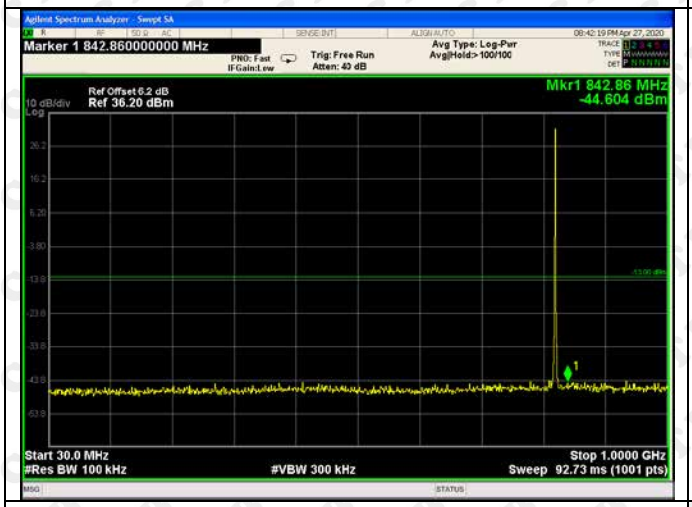
11.3 Test procedure

GSM850:
The EUT was connected to Spectrum Analyzer and Base Station Simulator via power Splitter. The measurement is carried out using a spectrum analyzer. The spectrum analyzer scans from 9kHz to the 10th harmonic of the carrier. The peak detector is used. RBW are set to 100 kHz and VBW are set to 300 kHz for below 1G, RBW are set to 1MHz and VBW are set to 3MHz for above 1G, Sweep is set to ATUO.
Band4:
The EUT was connected to Spectrum Analyzer and Base Station Simulator via power Splitter. The measurement is carried out using a spectrum analyzer. The spectrum analyzer scans from 30MHz to the 10th harmonic of the carrier. The peak detector is used. Set RBW 1MHz and VBW3MHz， Sweep is set to ATUO.
Of those disturbances below (limit – 20 dB), the mark is not required for the EUT.

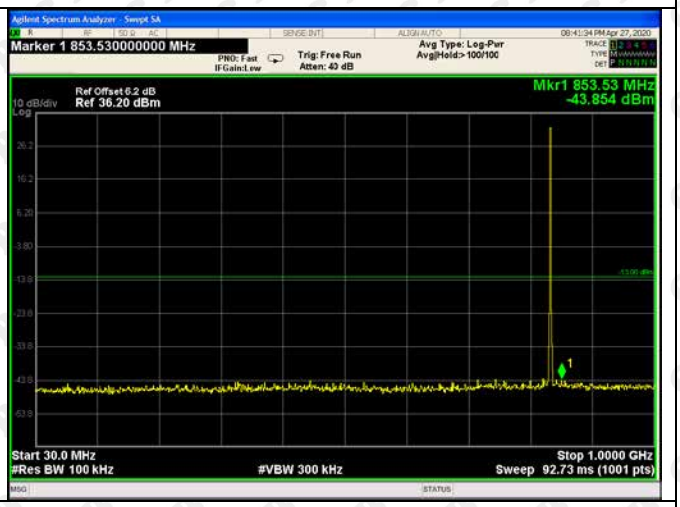
11.4 Test Result

Sweep from 9 kHz to 30MHz, and the emissions more than 20 dB below the permissible value are not reported.
If disturbances were found more than 20dB below limit line, the mark is not required for the EUT. The signal beyond the limit is carrier.

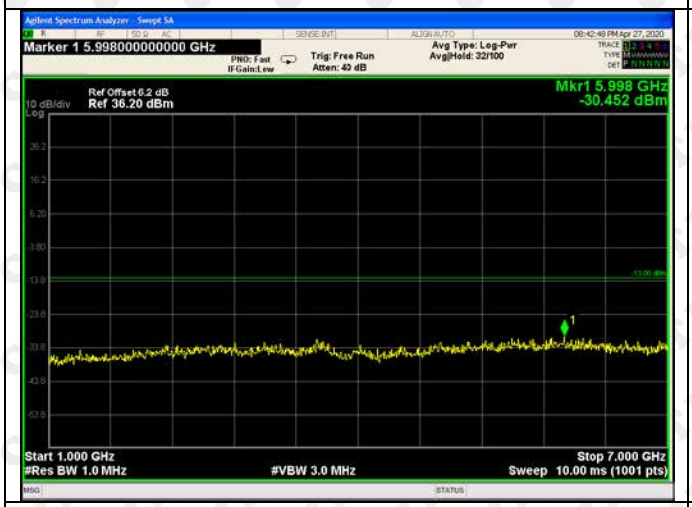
GSM 850 LCH 30MHz~1GHz



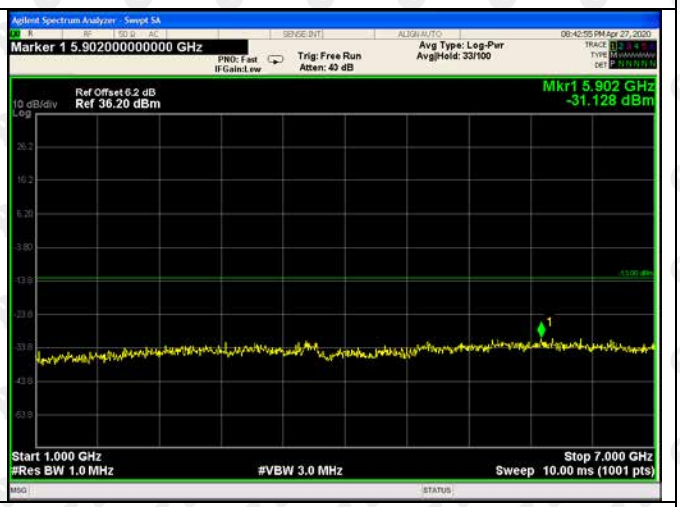
GSM 850 MCH 30MHz~1GHz



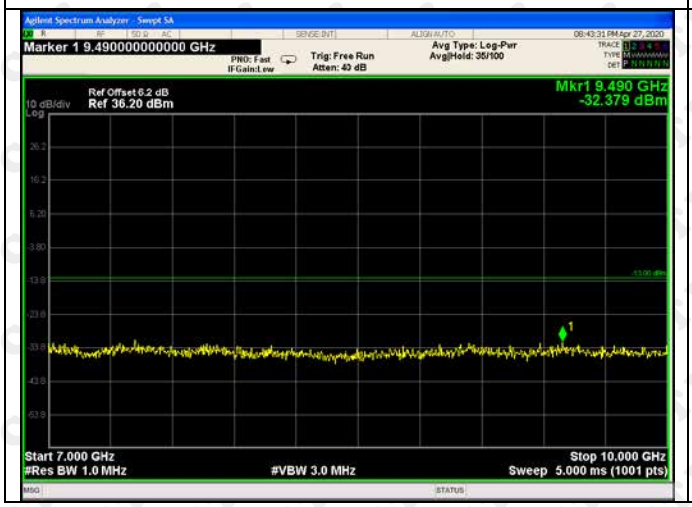
GSM 850 LCH 1GHz~7GHz



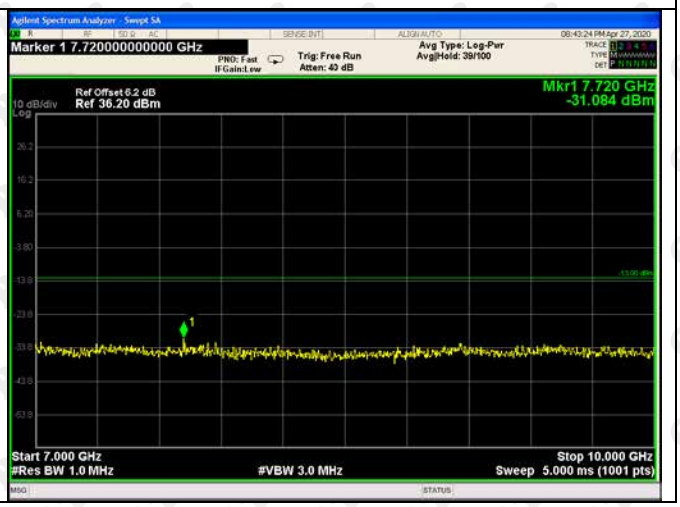
GSM 850 MCH 1GHz~7GHz



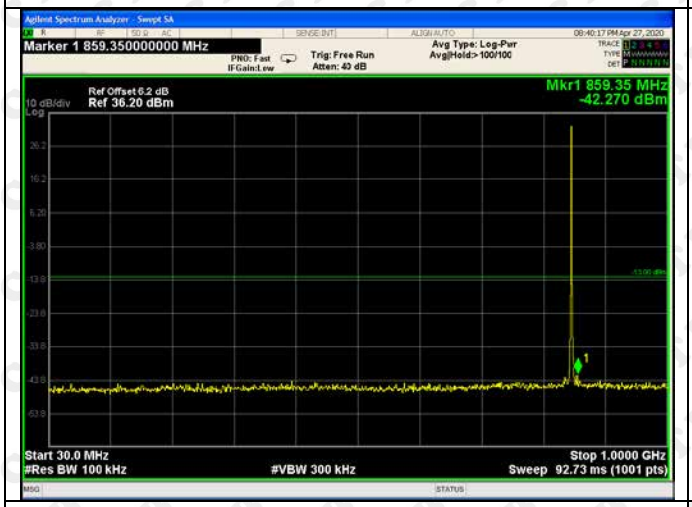
GSM 850 LCH 7GHz~10GHz



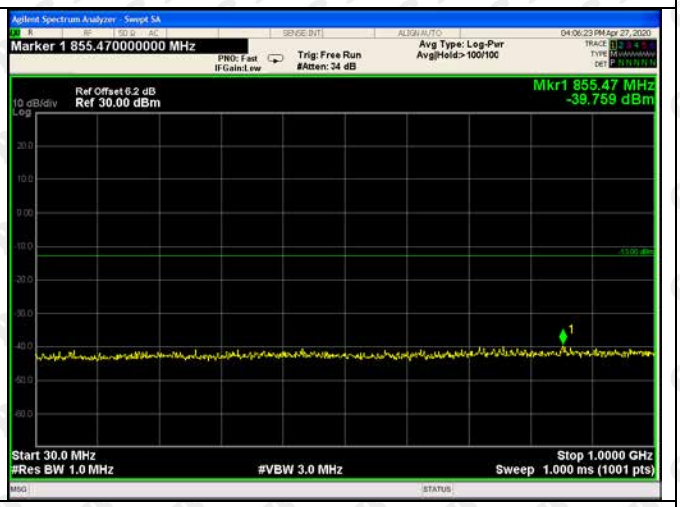
GSM 850 MCH 7GHz~10GHz



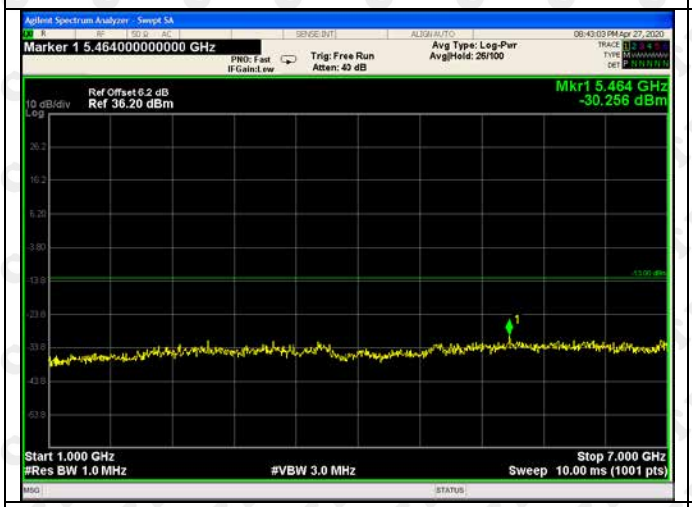
GSM 850 HCH 30MHz~1GHz



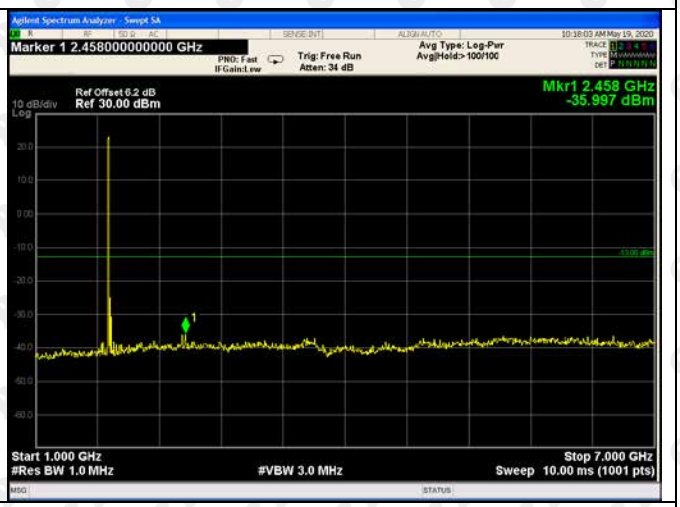
LTE Band 4 1.4MHz LCH 30MHz~1GHz



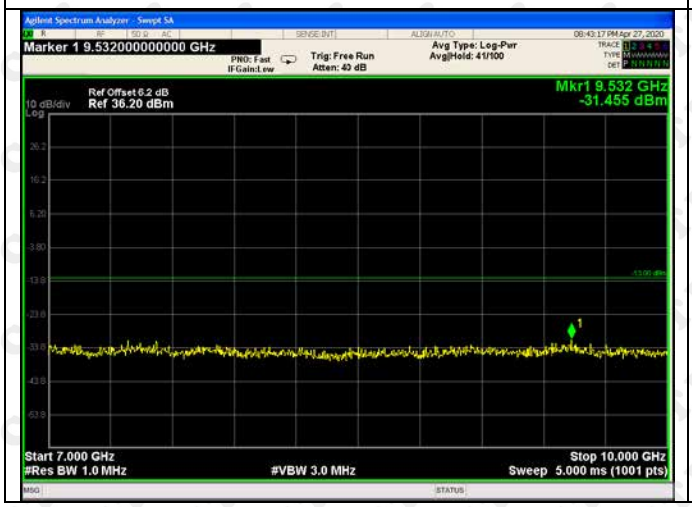
GSM 850 HCH 1GHz~7GHz



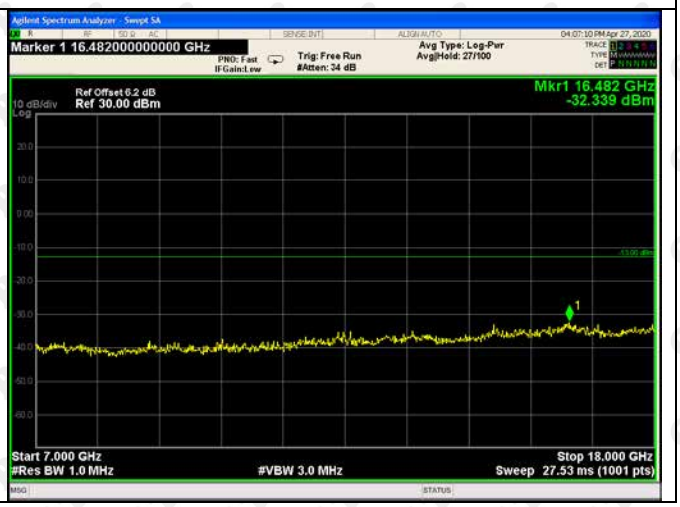
LTE Band 4 1.4MHz LCH 1GHz~7GHz



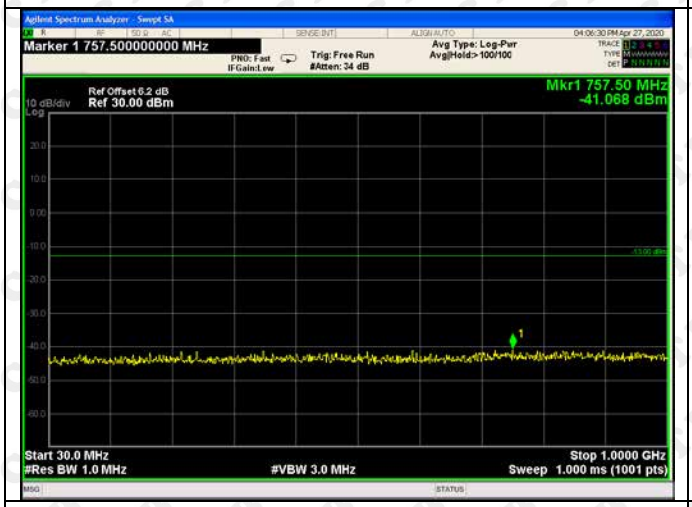
GSM 850 HCH 7GHz~18GHz



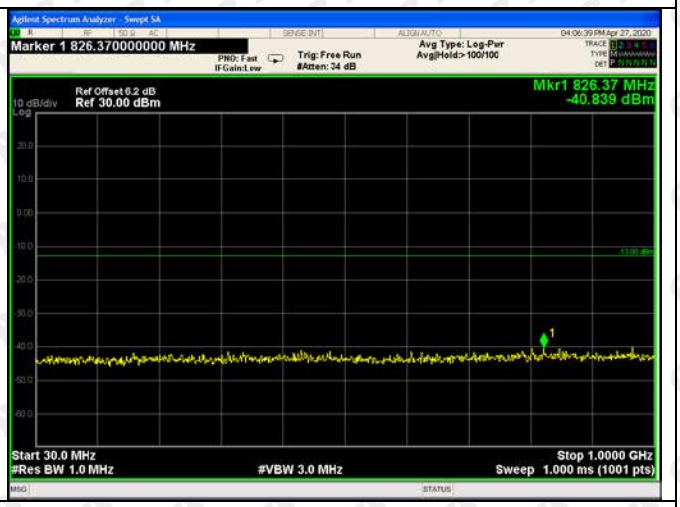
LTE Band 4 1.4MHz LCH 7GHz~18GHz



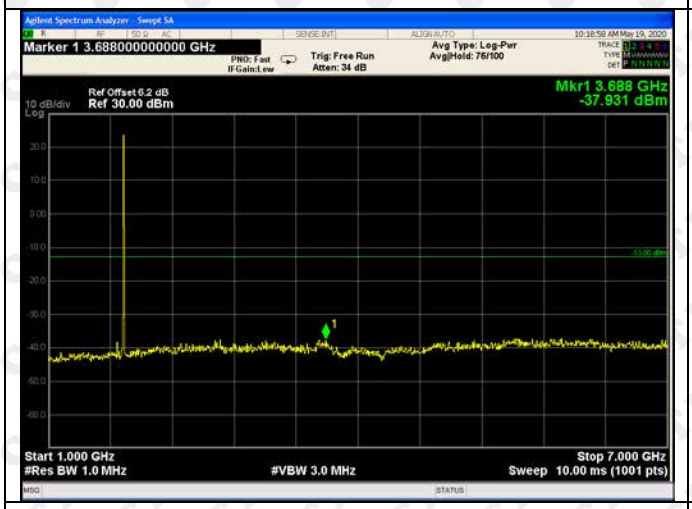
LTE Band 4 1.4MHz MCH 30MHz~1GHz



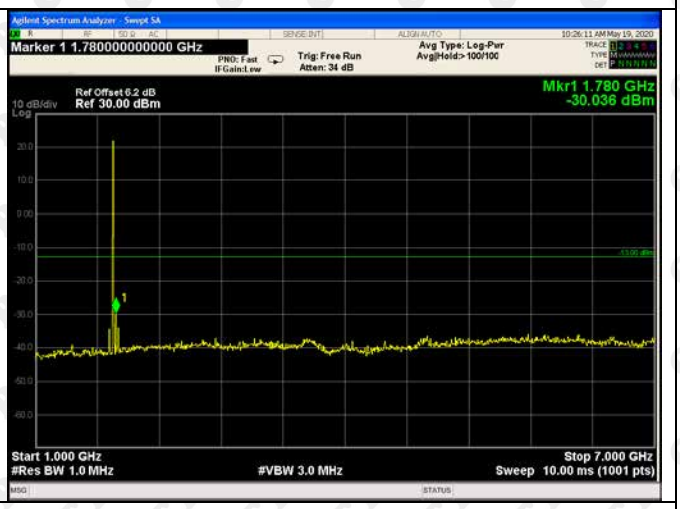
LTE Band 4 1.4MHz HCH 30MHz~1GHz



LTE Band 4 1.4MHz MCH 1GHz~7GHz



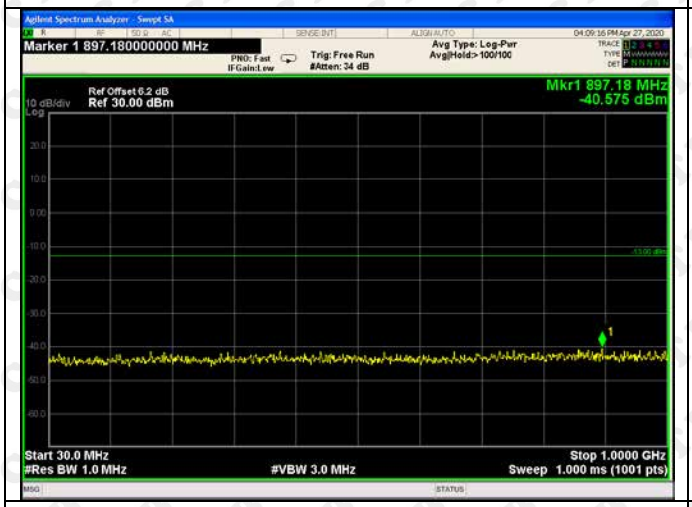
LTE Band 4 1.4MHz HCH 1GHz~7GHz



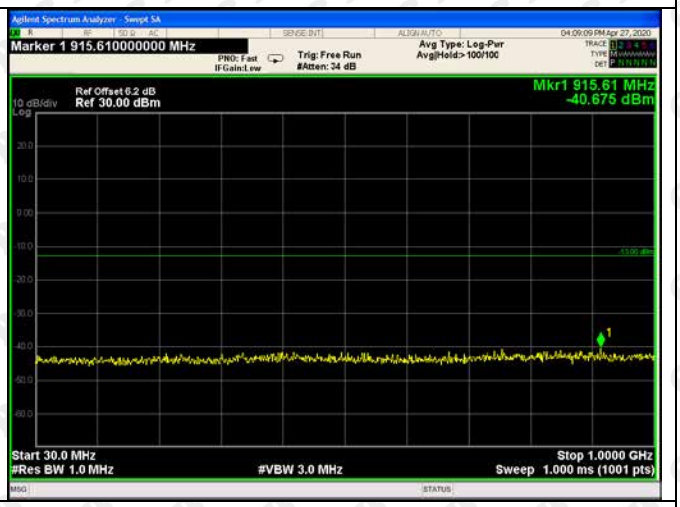
LTE Band 4 1.4MHz MCH 7GHz~18GHz

LTE Band 4 1.4MHz HCH 7GHz~18GHz

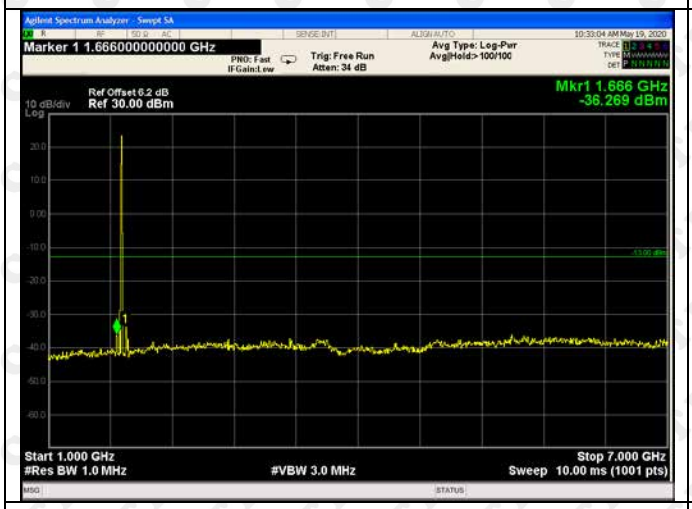
LTE Band 4 3MHz LCH 30MHz~1GHz



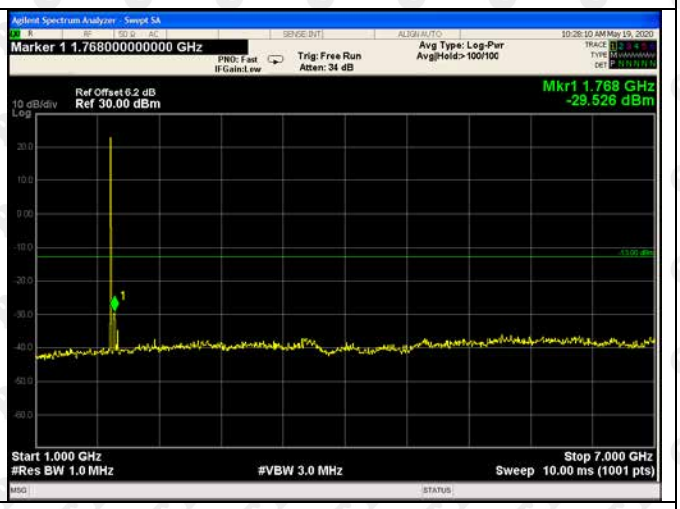
LTE Band 4 3MHz MCH 30MHz~1GHz



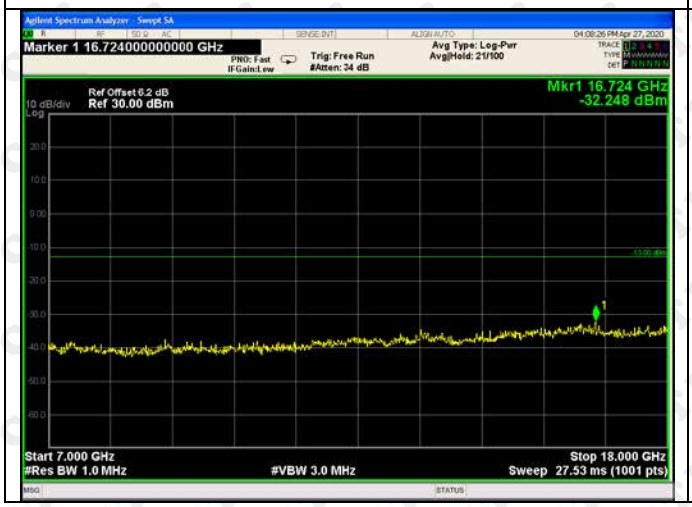
LTE Band 4 3MHz LCH 1GHz~7GHz



LTE Band 4 3MHz MCH 1GHz~7GHz

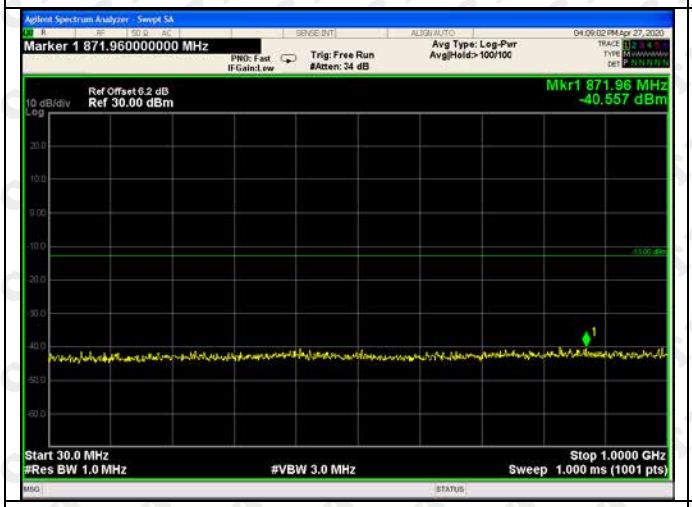


LTE Band 4 3MHz LCH 7GHz~18GHz

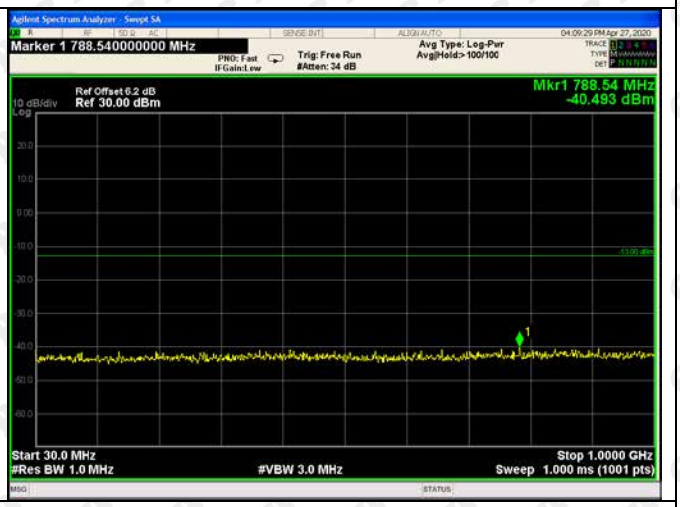


LTE Band 4 3MHz MCH 7GHz~18GHz

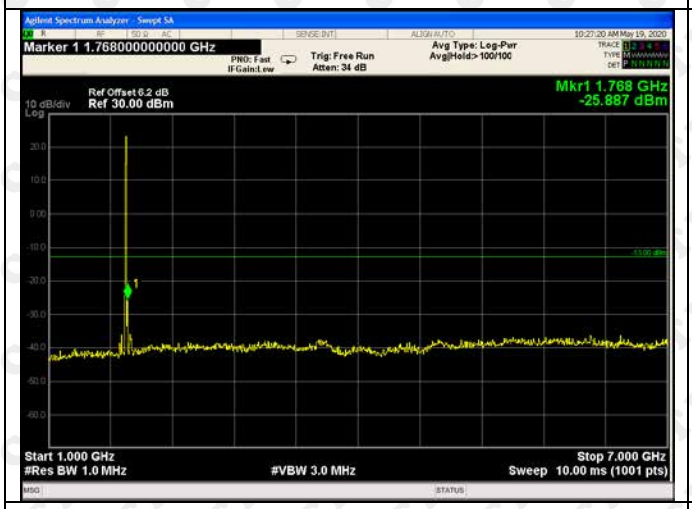
LTE Band 4 3MHz HCH 30MHz~1GHz



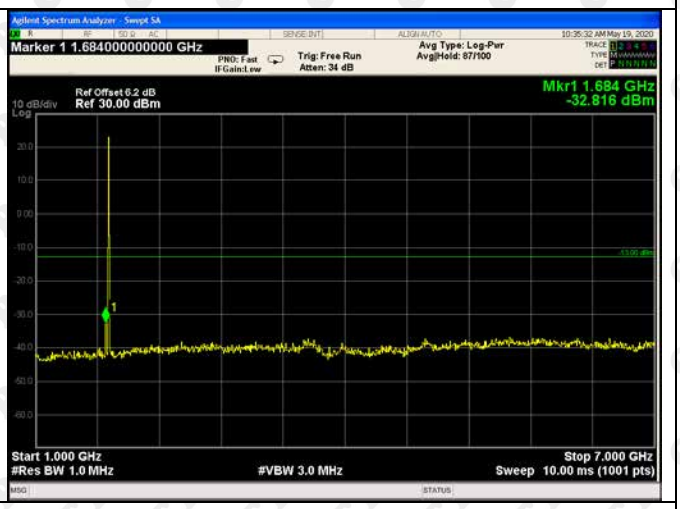
LTE Band 4 5MHz LCH 30MHz~1GHz



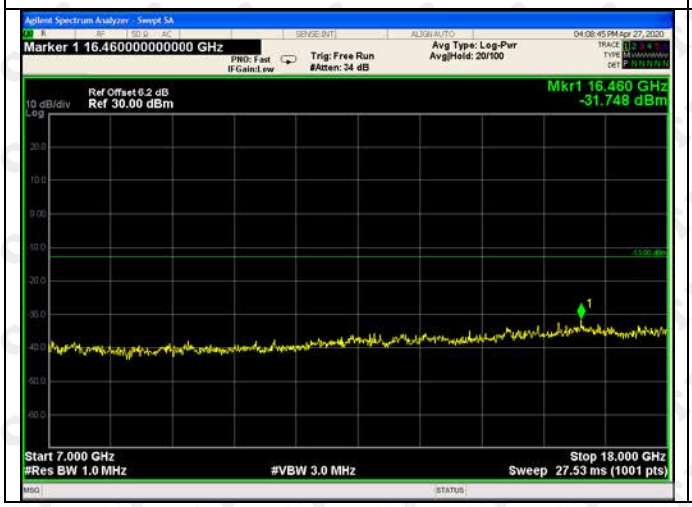
LTE Band 4 3MHz HCH 1GHz~7GHz



LTE Band 4 5MHz LCH 1GHz~7GHz

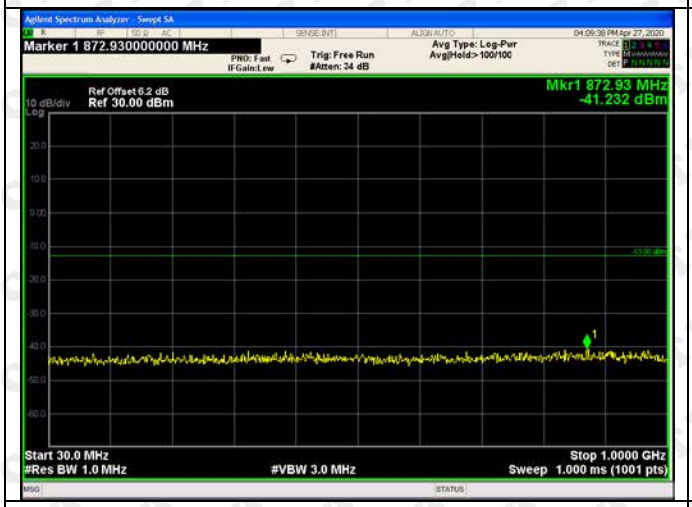


LTE Band 4 3MHz HCH 7GHz~18GHz

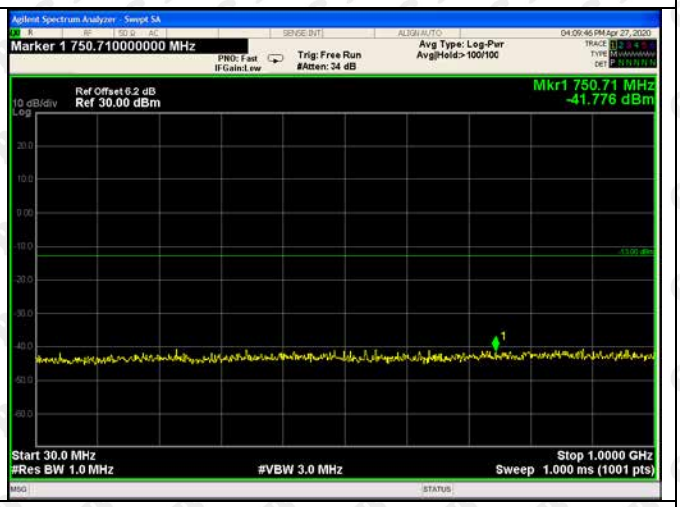


LTE Band 4 5MHz LCH 7GHz~18GHz

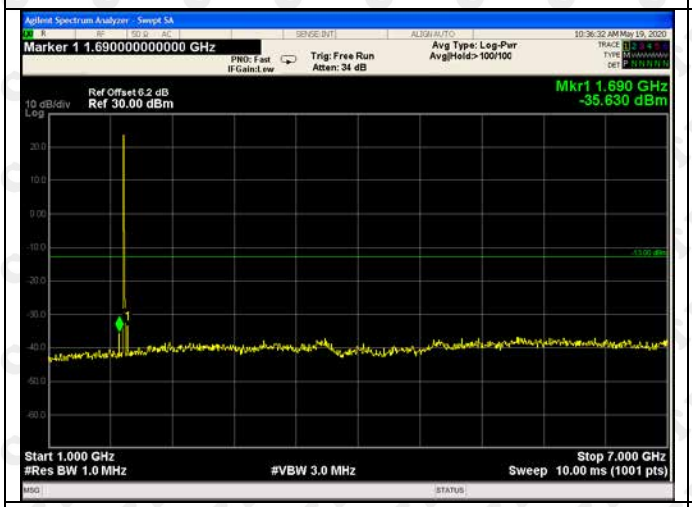
LTE Band 4 5MHz MCH 30MHz~1GHz



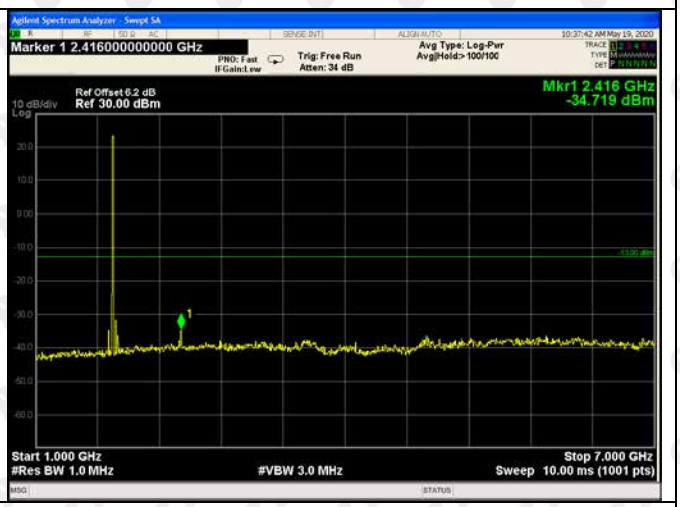
LTE Band 4 5MHz HCH 30MHz~1GHz



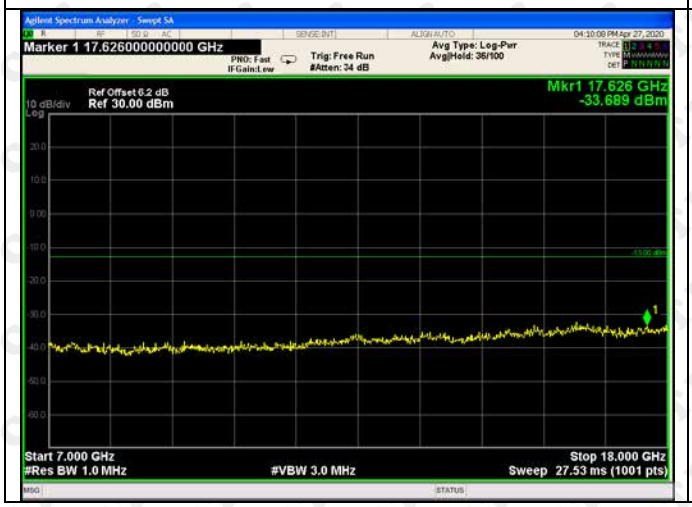
LTE Band 4 5MHz MCH 1GHz~7GHz



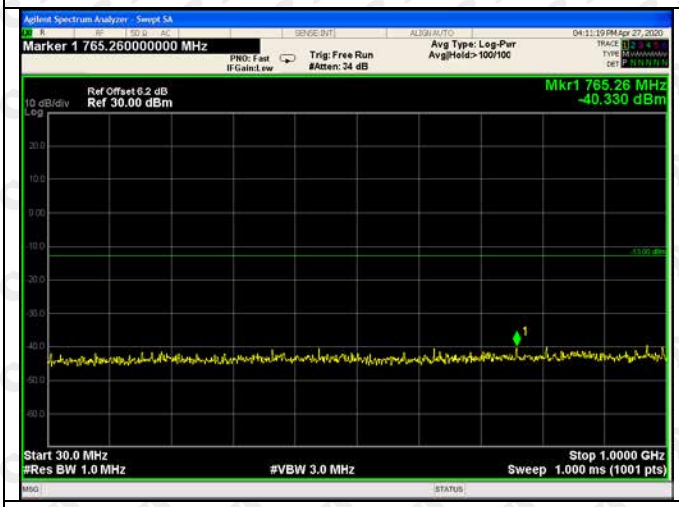
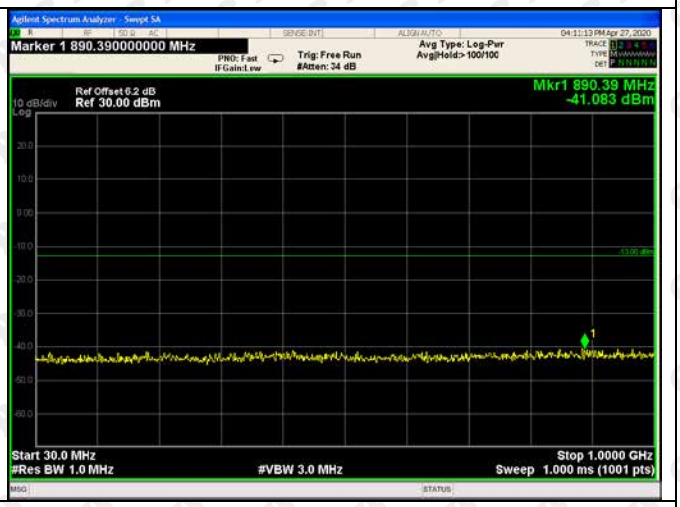
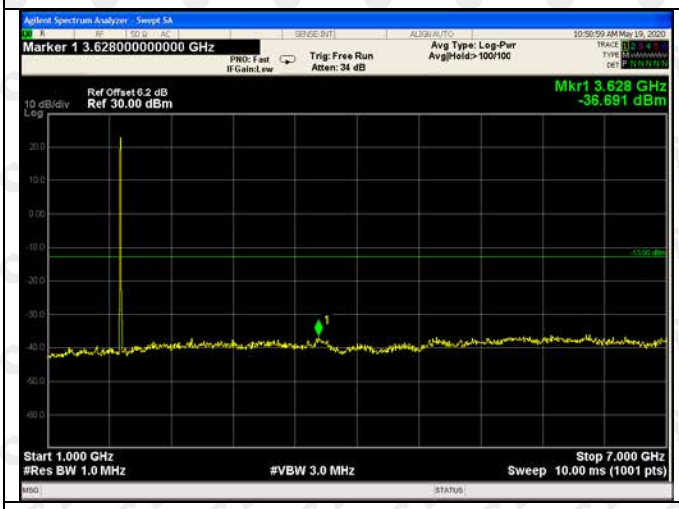
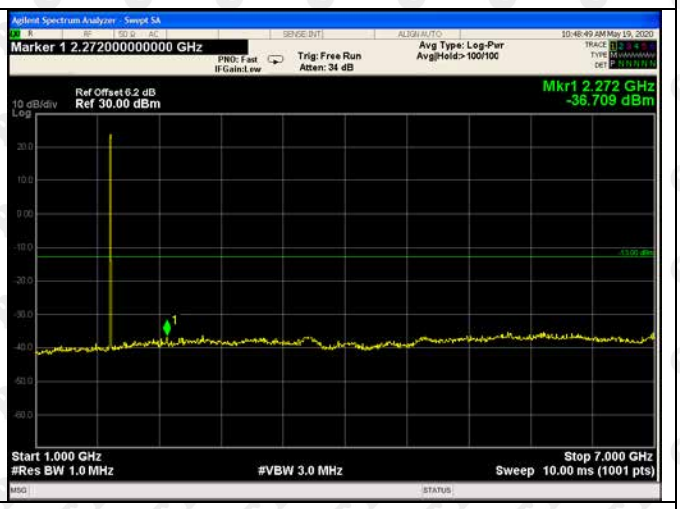
LTE Band 4 5MHz HCH 1GHz~7GHz



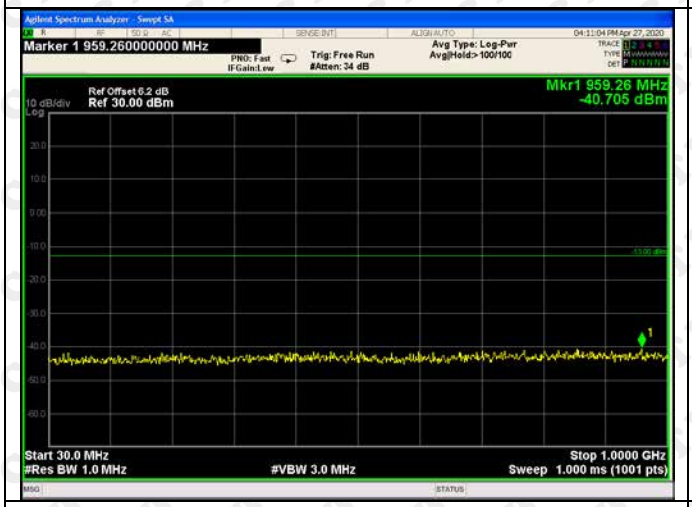
LTE Band 4 5MHz MCH 7GHz~18GHz



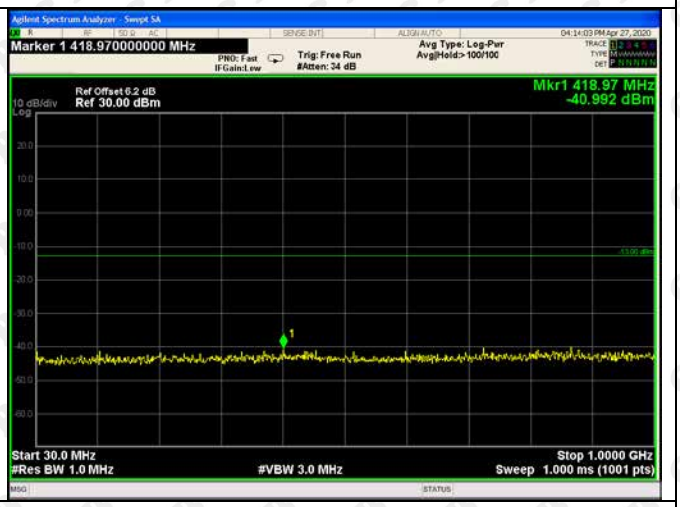
LTE Band 4 5MHz HCH 7GHz~18GHz

LTE Band 4 10MHz LCH 30MHz~1GHz	LTE Band 4 10MHz MCH 30MHz~1GHz
	
LTE Band 4 10MHz LCH 1GHz~7GHz	LTE Band 4 10MHz MCH 1GHz~7GHz
	
LTE Band 4 10MHz LCH 7GHz~18GHz	LTE Band 4 10MHz MCH 7GHz~18GHz

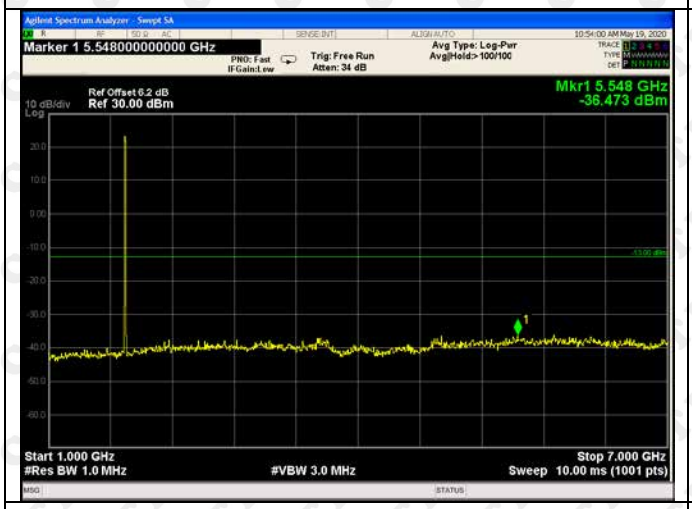
LTE Band 4 10MHz HCH 30MHz~1GHz



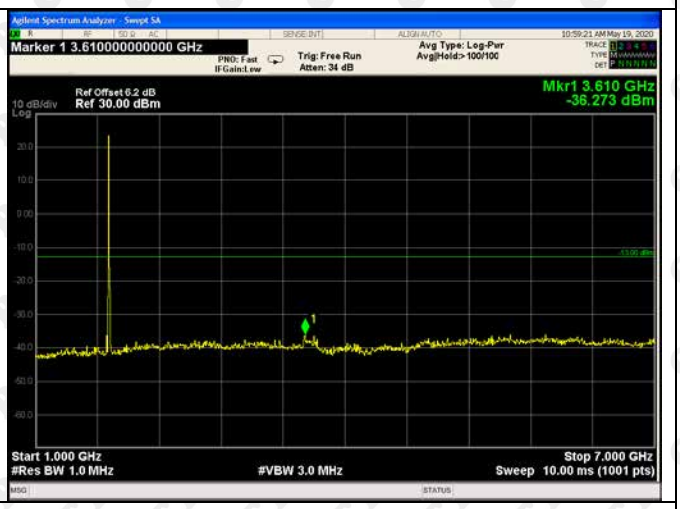
LTE Band 4 15MHz LCH 30MHz~1GHz



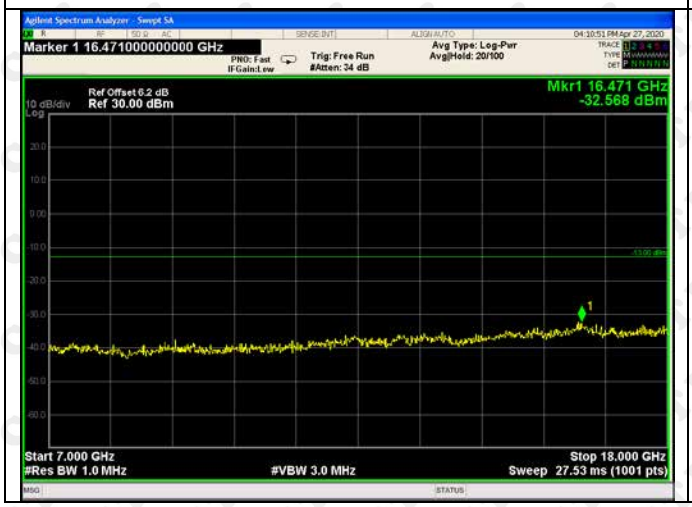
LTE Band 4 10MHz HCH 1GHz~7GHz



LTE Band 4 15MHz LCH 1GHz~7GHz

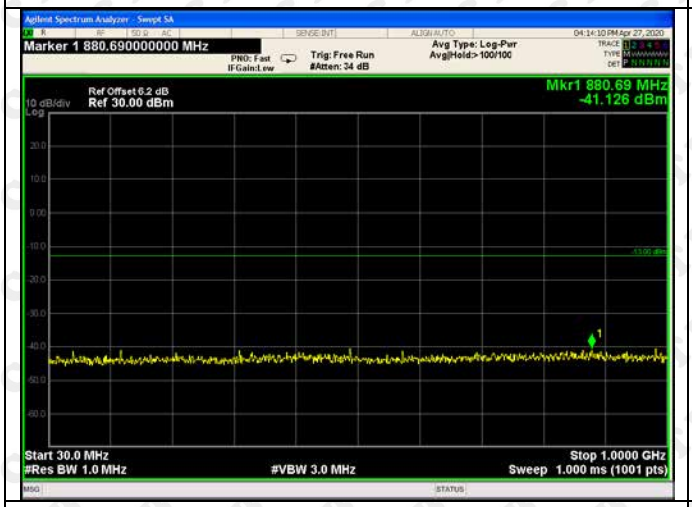


LTE Band 4 10MHz HCH 7GHz~18GHz

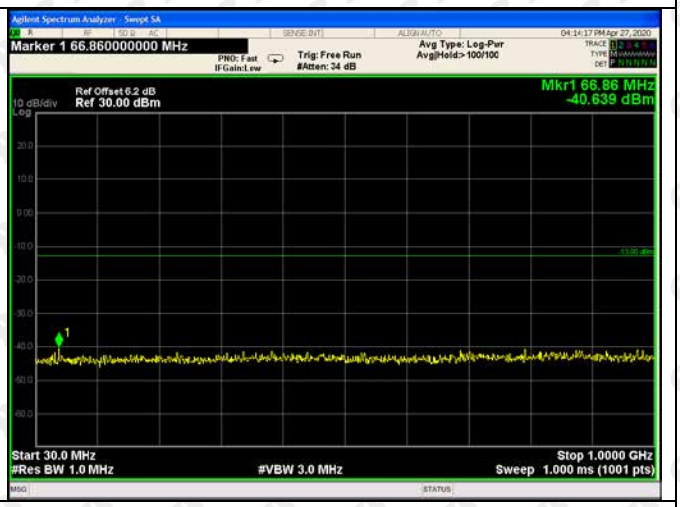


LTE Band 4 15MHz LCH 7GHz~18GHz

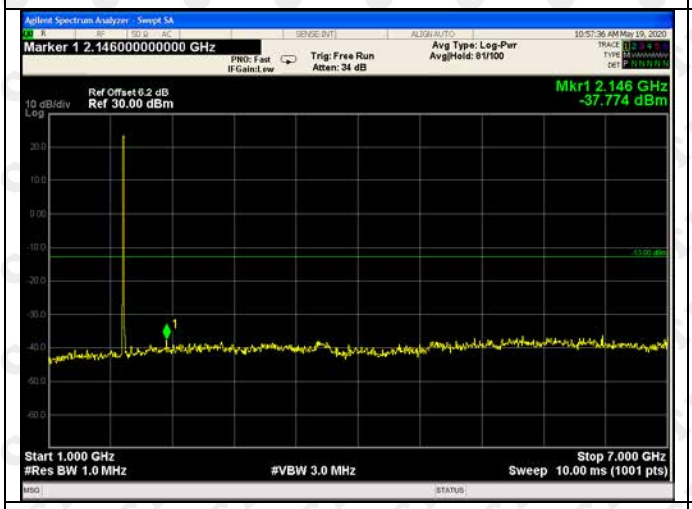
LTE Band 4 15MHz MCH 30MHz~1GHz



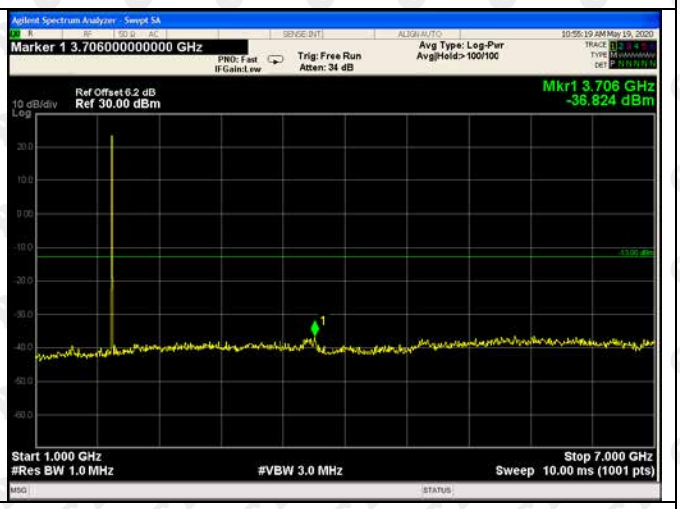
LTE Band 4 15MHz HCH 30MHz~1GHz



LTE Band 4 15MHz MCH 1GHz~7GHz

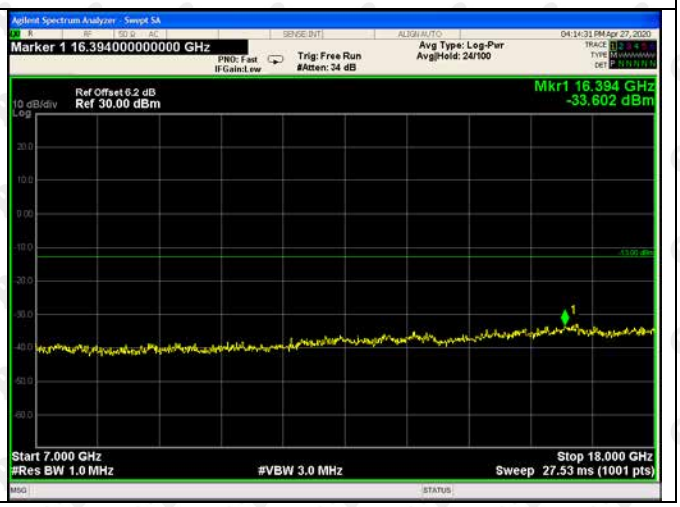


LTE Band 4 15MHz HCH 1GHz~7GHz

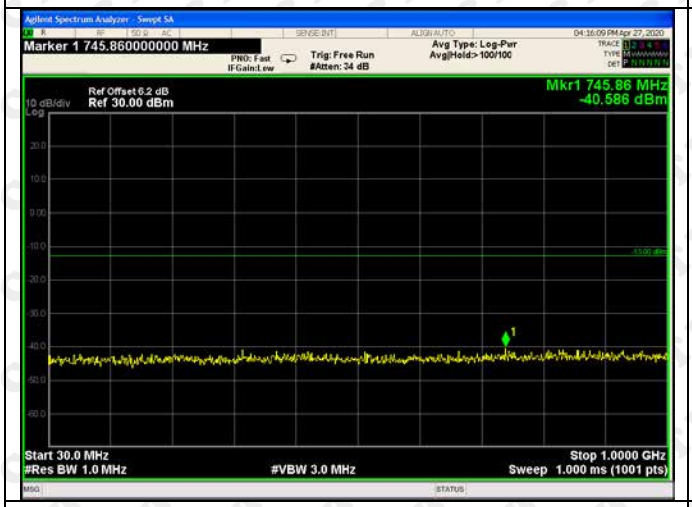


LTE Band 4 15MHz MCH 7GHz~18GHz

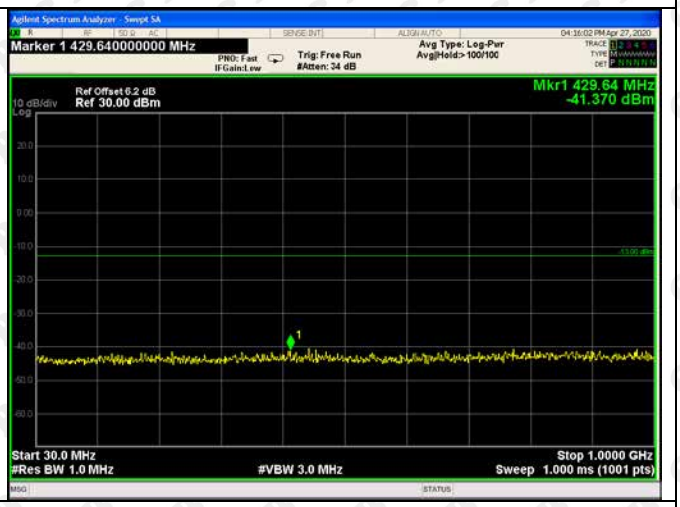
LTE Band 4 15MHz HCH 7GHz~18GHz



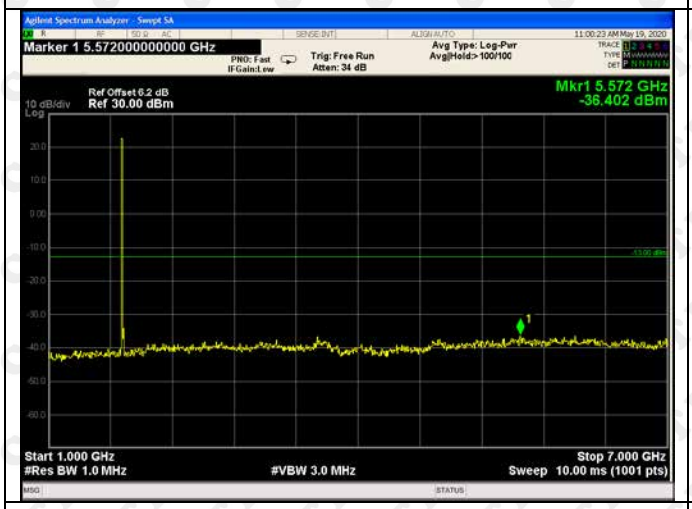
LTE Band 4 20MHz LCH 30MHz~1GHz



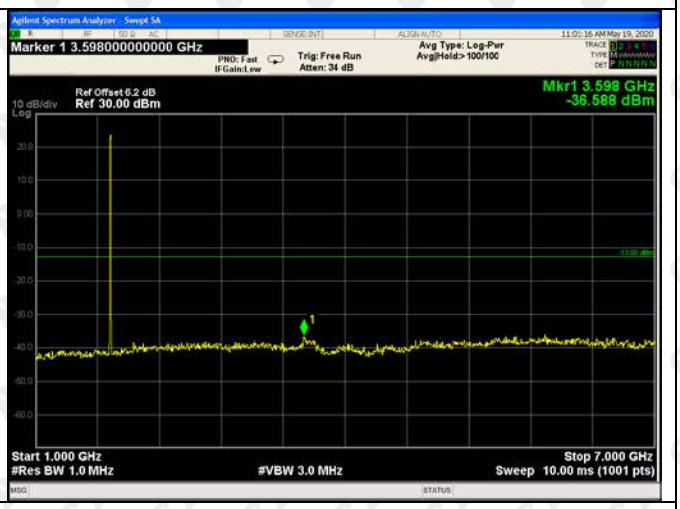
LTE Band 4 20MHz MCH 30MHz~1GHz



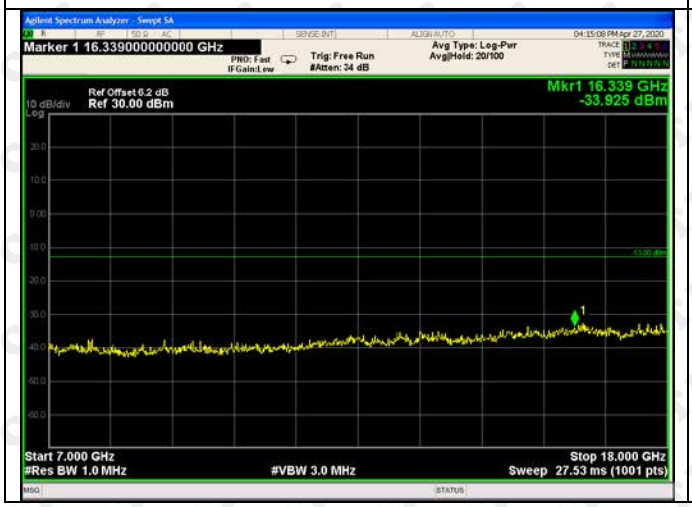
LTE Band 4 20MHz LCH 1GHz~7GHz



LTE Band 4 20MHz MCH 1GHz~7GHz

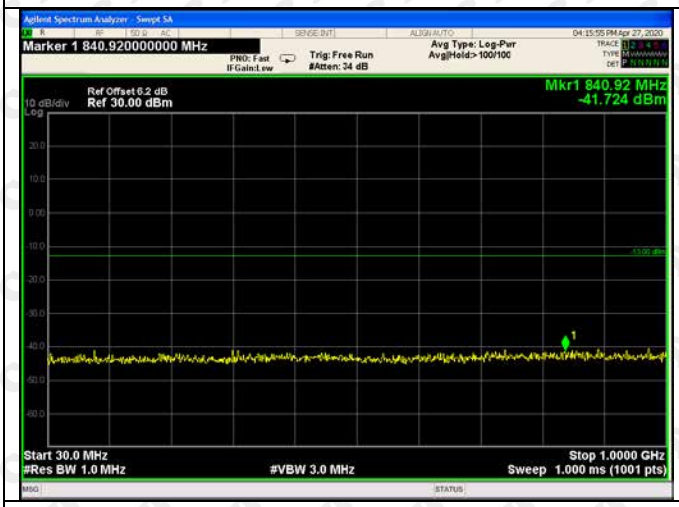


LTE Band 4 20MHz LCH 7GHz~18GHz

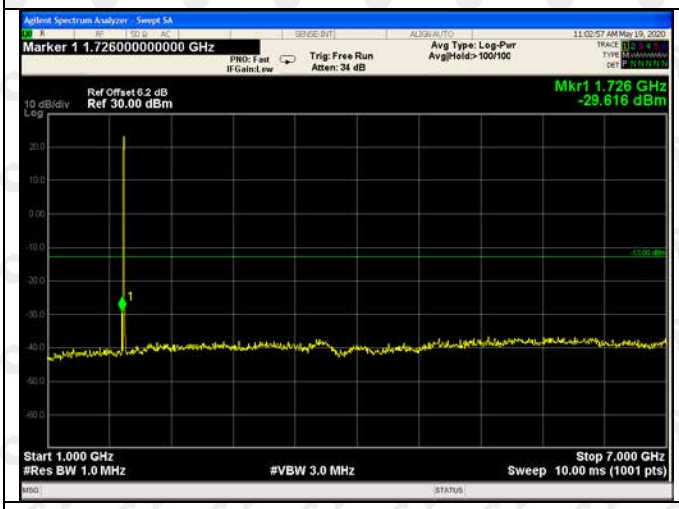


LTE Band 4 20MHz MCH 7GHz~18GHz

LTE Band 4 20MHz HCH 30MHz~1GHz



LTE Band 4 20MHz HCH 1GHz~7GHz



LTE Band 4 20MHz HCH 7GHz~18GHz

12. FIELD STRENGTH OF SPURIOUS RADIATIONR

12.1 Block Diagram Of Test Setup

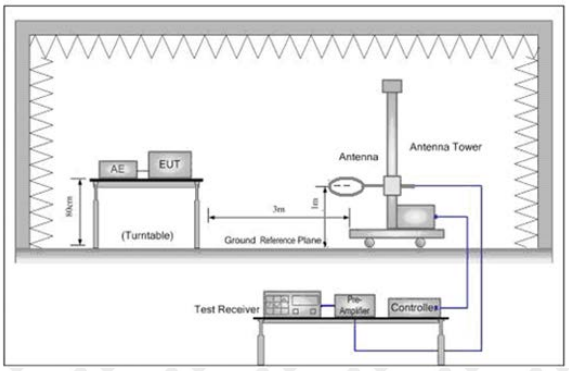


Figure 1. Below 30MHz

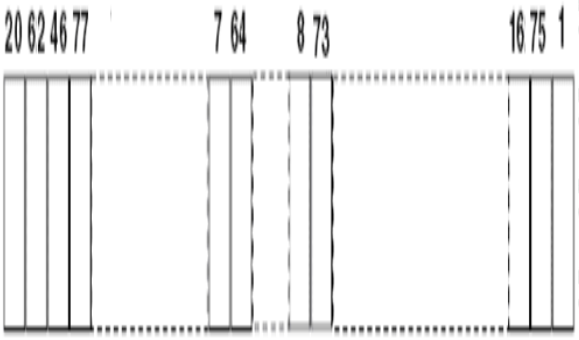


Figure 2. 30MHz to 1GHz

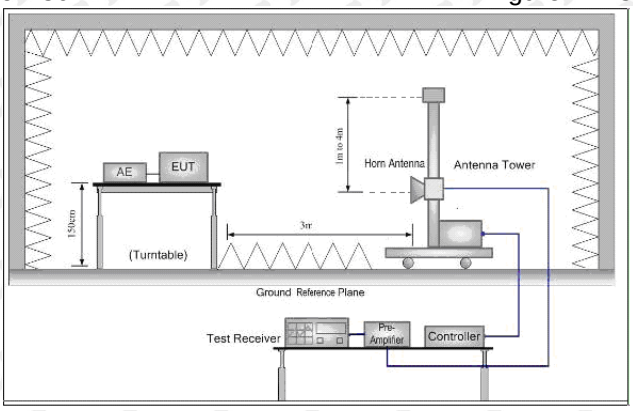


Figure 3. Above 1GHz

12.2 Limit

Attenuated at least 43+10log(P).

Limit	-13 dBm

12.3 Test procedure

3. Scan up to 10th harmonic, find the maximum radiation frequency to measure.
4. The technique used to find the Spurious Emissions of the transmitter was the antenna substitution method. Substitution method was performed to determine the actual ERP/EIRP emission levels of the EUT.

Test procedure as below:

1) The EUT was powered ON and placed on a 1.5m hight table at a 3 meter fully Anechoic Chamber. The antenna of the transmitter was extended to its maximum length. modulation mode and the measuring receiver shall be tuned to the frequency of the transmitter under test.
2) The EUT was set 3 meters(above 18GHz the distance is 1 meter) away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
3) The disturbance of the transmitter was maximized on the test receiver display by raising and lowering from 1m to 4m the receive antenna and by rotating through 360° the turntable. After the fundamental emission was maximized, a field strength measurement was made.

4) Steps 1) to 3) were performed with the EUT and the receive antenna in both vertical and horizontal polarization.
5) The transmitter was then removed and replaced with another antenna. The center of the antenna was approximately at the same location as the center of the transmitter.
6) A signal at the disturbance was fed to the substitution antenna by means of a non-radiating cable. With both the substitution and the receive antennas horizontally polarized, the receive antenna was raised and lowered to obtain a maximum reading at the test receiver. The level of the signal generator was adjusted until the measured field strength level in step 3) is obtained for this set of conditions.
7) The output power into the substitution antenna was then measured.
8) Steps 6) and 7)were repeated with both antennas polarized.
9) Calculate power in dBm by the following formula:

ERP(dBm) = Pg(dBm) - cable loss (dB)- + antenna gain (dBd)
EIRP(dBm) = Pg(dBm) – cable loss (dB) + antenna gain (dBi)
EIRP=ERP+2.15dB

where:
Pg is the generator output power into the substitution antenna.

10) Test the EUT in the lowest channel, the middle channel the Highest channel
11) The radiation measurements are performed in X, Y, Z axis positioning for EUT operation mode,And found the X axis positioning which it is worse case.

Repeat above procedures until all frequencies measured was complete.

Receiver Setup

Frequency (GHz)	RBW	VBW	Sweep time (s)
0.00009~0.15	1KHz	3KHz	30
0.00015~0.03	10KHz	30KHz	10
0.03~1	100KHz	300KHz	10
1~2	1 MHz	3 MHz	2
2~5	1 MHz	3 MHz	3
5~8	1 MHz	3 MHz	3
8~11	1 MHz	3 MHz	3
11~14	1 MHz	3 MHz	3
14~18	1 MHz	3 MHz	3
18~20	1 MHz	3 MHz	2

12.4 Test Result

Test Data:
Above 1GHz

GSM 850 128 channel (lowest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1215.871	150	316	-59.31	-13.00	-46.31	Pass	H
1635.350	152	96	-53.92	-13.00	-40.92	Pass	H
3822.127	153	146	-49.55	-13.00	-36.55	Pass	H
5838.507	152	64	-46.05	-13.00	-33.05	Pass	H
6512.130	151	83	-47.11	-13.00	-34.11	Pass	H
7950.275	151	50	-47.10	-13.00	-34.10	Pass	H
1226.207	151	234	-58.72	-13.00	-45.72	Pass	V
1438.993	152	147	-60.10	-13.00	-47.10	Pass	V
3448.514	150	25	-53.52	-13.00	-40.52	Pass	V
3912.987	149	80	-52.27	-13.00	-39.27	Pass	V
5757.329	150	244	-48.04	-13.00	-35.04	Pass	V
6523.485	153	337	-48.00	-13.00	-35.00	Pass	V

GSM 850 190 channel (middle channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1283.361	149	259	-60.81	-13.00	-47.81	Pass	H
1566.723	149	330	-52.99	-13.00	-39.99	Pass	H
3802.785	151	347	-50.02	-13.00	-37.02	Pass	H
5772.669	149	290	-46.79	-13.00	-33.79	Pass	H
6488.006	151	158	-48.42	-13.00	-35.42	Pass	H
7954.262	151	150	-47.46	-13.00	-34.46	Pass	H
1207.131	152	145	-59.94	-13.00	-46.94	Pass	V
1365.898	148	19	-59.17	-13.00	-46.17	Pass	V
3451.445	149	246	-52.95	-13.00	-39.95	Pass	V
3856.153	150	305	-51.02	-13.00	-38.02	Pass	V
5733.738	148	188	-46.62	-13.00	-33.62	Pass	V
6478.735	150	239	-49.23	-13.00	-36.23	Pass	V

GSM 850 251 channel (highest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1213.225	150	327	-59.51	-13.00	-46.51	Pass	H
1570.553	152	163	-51.17	-13.00	-38.17	Pass	H
3792.053	152	295	-50.12	-13.00	-37.12	Pass	H
5787.131	149	158	-46.91	-13.00	-33.91	Pass	H
6434.818	153	226	-47.16	-13.00	-34.16	Pass	H
7995.005	153	93	-49.10	-13.00	-36.10	Pass	H
1209.296	152	212	-58.24	-13.00	-45.24	Pass	V
1394.250	149	54	-58.87	-13.00	-45.87	Pass	V
3432.111	148	52	-54.44	-13.00	-41.44	Pass	V
3824.993	150	132	-51.49	-13.00	-38.49	Pass	V
5760.824	149	11	-47.16	-13.00	-34.16	Pass	V
6470.898	150	256	-49.17	-13.00	-36.17	Pass	V

QPSK

Band 4 19957 channel/BW1.4(lowest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1216.455	152	188	-59.96	-13.00	-46.96	Pass	H
1598.199	151	313	-53.25	-13.00	-40.25	Pass	H
3784.797	151	196	-50.51	-13.00	-37.51	Pass	H
5812.023	152	46	-46.38	-13.00	-33.38	Pass	H
6476.884	149	193	-48.52	-13.00	-35.52	Pass	H
8010.626	153	299	-46.26	-13.00	-33.26	Pass	H
1164.437	153	170	-59.86	-13.00	-46.86	Pass	V
1421.998	151	326	-60.45	-13.00	-47.45	Pass	V
3421.200	152	209	-54.27	-13.00	-41.27	Pass	V
3886.432	153	168	-51.41	-13.00	-38.41	Pass	V
5769.240	151	253	-47.09	-13.00	-34.09	Pass	V
6470.916	152	231	-47.85	-13.00	-34.85	Pass	V

Band 4 20176 channel/BW1.4(middle channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1252.719	151	69	-59.86	-13.00	-46.86	Pass	H
1600.180	152	318	-51.65	-13.00	-38.65	Pass	H
3851.547	152	173	-49.37	-13.00	-36.37	Pass	H
5784.349	149	47	-48.34	-13.00	-35.34	Pass	H
6442.792	153	94	-46.89	-13.00	-33.89	Pass	H
8009.591	149	185	-46.74	-13.00	-33.74	Pass	H
1225.750	150	101	-60.25	-13.00	-47.25	Pass	V
1439.465	152	216	-59.92	-13.00	-46.92	Pass	V
3470.275	151	223	-52.62	-13.00	-39.62	Pass	V
3885.131	153	66	-49.97	-13.00	-36.97	Pass	V
5756.464	148	71	-48.31	-13.00	-35.31	Pass	V
6558.726	149	2	-50.08	-13.00	-37.08	Pass	V

Band 4 20393 channel/BW1.4(highest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1202.906	152	223	-59.95	-13.00	-46.95	Pass	H
1618.068	152	27	-51.41	-13.00	-38.41	Pass	H
3866.206	150	145	-50.53	-13.00	-37.53	Pass	H
5779.733	152	62	-46.79	-13.00	-33.79	Pass	H
6425.712	152	213	-46.70	-13.00	-33.70	Pass	H
7968.099	148	118	-46.62	-13.00	-33.62	Pass	H
1200.570	150	253	-59.09	-13.00	-46.09	Pass	V
1411.287	151	80	-59.76	-13.00	-46.76	Pass	V
3459.938	152	50	-54.11	-13.00	-41.11	Pass	V
3864.397	150	17	-50.72	-13.00	-37.72	Pass	V
5829.536	152	303	-48.03	-13.00	-35.03	Pass	V
6506.977	149	357	-48.31	-13.00	-35.31	Pass	V

16QAM

Band 4 19957 channel/BW1.4(lowest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1199.966	152	60	-60.10	-13.00	-47.10	Pass	H
1614.296	152	295	-51.86	-13.00	-38.86	Pass	H
3857.025	152	279	-50.99	-13.00	-37.99	Pass	H
5825.718	149	333	-46.76	-13.00	-33.76	Pass	H
6418.159	152	168	-48.14	-13.00	-35.14	Pass	H
8001.211	149	112	-48.24	-13.00	-35.24	Pass	H
1165.870	152	71	-58.30	-13.00	-45.30	Pass	V
1433.443	150	111	-59.74	-13.00	-46.74	Pass	V
3426.579	153	81	-53.06	-13.00	-40.06	Pass	V
3882.539	150	128	-50.70	-13.00	-37.70	Pass	V
5789.813	151	253	-47.95	-13.00	-34.95	Pass	V
6543.409	153	288	-48.22	-13.00	-35.22	Pass	V

Band 4 20176 channel/BW1.4(middle channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1239.084	148	196	-60.04	-13.00	-47.04	Pass	H
1600.460	152	52	-52.44	-13.00	-39.44	Pass	H
3809.877	148	312	-50.46	-13.00	-37.46	Pass	H
5825.257	151	85	-48.17	-13.00	-35.17	Pass	H
6476.749	150	267	-46.60	-13.00	-33.60	Pass	H
7982.445	150	55	-47.74	-13.00	-34.74	Pass	H
1216.255	149	57	-59.24	-13.00	-46.24	Pass	V
1428.920	149	265	-59.63	-13.00	-46.63	Pass	V
3482.736	149	174	-52.69	-13.00	-39.69	Pass	V
3826.965	153	151	-52.28	-13.00	-39.28	Pass	V
5785.476	150	217	-46.23	-13.00	-33.23	Pass	V
6547.172	151	239	-47.49	-13.00	-34.49	Pass	V

Band 4 20393 channel/BW1.4(highest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1197.344	152	176	-60.87	-13.00	-47.87	Pass	H
1652.674	151	193	-51.43	-13.00	-38.43	Pass	H
3833.007	149	97	-50.69	-13.00	-37.69	Pass	H
5777.382	151	284	-48.36	-13.00	-35.36	Pass	H
6502.811	149	346	-45.98	-13.00	-32.98	Pass	H
7957.780	150	72	-48.15	-13.00	-35.15	Pass	H
1224.188	149	355	-59.92	-13.00	-46.92	Pass	V
1423.421	149	89	-60.02	-13.00	-47.02	Pass	V
3425.585	150	245	-53.73	-13.00	-40.73	Pass	V
3858.329	148	54	-51.91	-13.00	-38.91	Pass	V
5765.473	151	136	-47.58	-13.00	-34.58	Pass	V
6527.410	150	176	-47.54	-13.00	-34.54	Pass	V

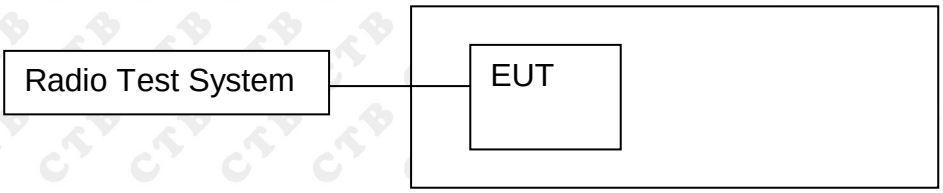
Note:

1) Scan from 9kHz to 25GHz, the disturbance above 13GHz and below 1GHz are attenuated more than 20 dB below the applicable limit and not required to be reported, the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.

2) Tested with all kind of bandwidth,RB Size and RB Offset, Found the 1.4MHz with full RB were the worst case; and then Only the worst case is recorded in the report.

13. FREQUENCY STABILITY

13.1 Block Diagram Of Test Setup



13.2 Limit

Operation Band	Frequency stability Limit(ppm)
GSM/GPRS/EDGE/WCDMA 850	±2.5ppm
GSM/GPRS/EDGE/WCDMA 1900	---

13.3 Test procedure

The transmitter output was connected to a calibrated coaxial cable and a Base Station Simulator. The Base Station Simulator was set to force the EUT to its maximum power setting. The tests were performed at three frequencies (low channel and high channel).The EUT was place in the temperature chamber, the DC leads and RF output cable exited the chamber though an opening made for that purpose. After operate the equipment in standby conditions for 15 minutes before proceeding. The temperature was varied from -30°C to +50°C at intervals of not more than 10°C The frequency stability was read from the base station at 25°C the input voltage was varied +/-15%, the frequency stability and input voltage was record.

13.4 Test Result

GSM 1900

GSM 850							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
GPRS	LCH	VL	TN	-0.02	-0.000025	± 2.5	PASS
		VN	TN	-2.12	-0.002578	± 2.5	PASS
		VH	TN	-2.14	-0.002599	± 2.5	PASS
	MCH	VL	TN	-4.16	-0.004974	± 2.5	PASS
		VN	TN	-2.71	-0.003242	± 2.5	PASS
		VH	TN	-5.11	-0.006102	± 2.5	PASS
	HCH	VL	TN	-1.19	-0.001403	± 2.5	PASS
		VN	TN	-0.59	-0.000694	± 2.5	PASS
		VH	TN	0.89	0.001048	± 2.5	PASS
EGPRS	LCH	VL	TN	-1.85	-0.002248	± 2.5	PASS
		VN	TN	-1.86	-0.002262	± 2.5	PASS
		VH	TN	-2.36	-0.002861	± 2.5	PASS
	MCH	VL	TN	-2.65	-0.003173	± 2.5	PASS
		VN	TN	-3.39	-0.004056	± 2.5	PASS
		VH	TN	-2.37	-0.002832	± 2.5	PASS
	HCH	VL	TN	-1.19	-0.001401	± 2.5	PASS
		VN	TN	0.02	0.000018	± 2.5	PASS
		VH	TN	-0.37	-0.000433	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
GPRS	LCH	VN	-30	-0.07	-0.000084	± 2.5	PASS
		VN	-20	-1.71	-0.002077	± 2.5	PASS
		VN	-10	-2.04	-0.002472	± 2.5	PASS
		VN	0	-3.81	-0.004617	± 2.5	PASS
		VN	10	-1.98	-0.002407	± 2.5	PASS
		VN	20	-3.72	-0.004515	± 2.5	PASS
		VN	30	-1.08	-0.001315	± 2.5	PASS
		VN	40	-0.18	-0.000221	± 2.5	PASS
		VN	50	0.95	0.001153	± 2.5	PASS
	MCH	VN	-30	-1.23	-0.001450	± 2.5	PASS
		VN	-20	-1.88	-0.002219	± 2.5	PASS
		VN	-10	-1.33	-0.001566	± 2.5	PASS
		VN	0	-2.37	-0.002797	± 2.5	PASS
		VN	10	-2.40	-0.002825	± 2.5	PASS
		VN	20	-2.66	-0.003133	± 2.5	PASS
		VN	30	-0.74	-0.000876	± 2.5	PASS
		VN	40	1.73	0.002044	± 2.5	PASS
		VN	50	1.25	0.001468	± 2.5	PASS
	HCH	VN	-30	0.46	0.000537	± 2.5	PASS
		VN	-20	-1.33	-0.001570	± 2.5	PASS
		VN	-10	-1.98	-0.002329	± 2.5	PASS
		VN	0	-1.59	-0.001878	± 2.5	PASS

		VN	10	0.05	0.000059	± 2.5	PASS
		VN	20	0.11	0.000127	± 2.5	PASS
		VN	30	-1.40	-0.001652	± 2.5	PASS
		VN	40	0.23	0.000271	± 2.5	PASS
		VN	50	0.30	0.000349	± 2.5	PASS
EGPRS	LCH	VN	-30	-0.16	-0.000195	± 2.5	PASS
		VN	-20	-1.37	-0.001665	± 2.5	PASS
		VN	-10	-2.08	-0.002518	± 2.5	PASS
		VN	0	-3.61	-0.004378	± 2.5	PASS
		VN	10	-1.58	-0.001918	± 2.5	PASS
		VN	20	-4.29	-0.005206	± 2.5	PASS
		VN	30	-1.04	-0.001266	± 2.5	PASS
		VN	40	0.16	0.000189	± 2.5	PASS
		VN	50	0.98	0.001185	± 2.5	PASS
	MCH	VN	-30	-1.44	-0.001699	± 2.5	PASS
		VN	-20	-1.90	-0.002237	± 2.5	PASS
		VN	-10	-1.42	-0.001670	± 2.5	PASS
		VN	0	-2.89	-0.003403	± 2.5	PASS
		VN	10	-3.04	-0.003580	± 2.5	PASS
		VN	20	-2.99	-0.003526	± 2.5	PASS
		VN	30	-0.85	-0.001001	± 2.5	PASS
		VN	40	0.94	0.001110	± 2.5	PASS
		VN	50	1.21	0.001422	± 2.5	PASS
	HCH	VN	-30	0.23	0.000276	± 2.5	PASS
		VN	-20	-1.77	-0.002081	± 2.5	PASS
		VN	-10	-2.11	-0.002482	± 2.5	PASS
		VN	0	-0.92	-0.001085	± 2.5	PASS
		VN	10	-0.48	-0.000565	± 2.5	PASS
		VN	20	0.20	0.000231	± 2.5	PASS
		VN	30	-0.96	-0.001126	± 2.5	PASS
		VN	40	-0.02	-0.000019	± 2.5	PASS
		VN	50	1.06	0.001251	± 2.5	PASS

Band4:

Channel Bandwidth: 1.4 MHz

Channel Bandwidth: 1.4 MHz					
Voltage					
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)
QPSK	LCH	VL	TN	-0.19	-0.000109
		VN	TN	-1.63	-0.000953
		VH	TN	-1.88	-0.001097
	MCH	VL	TN	-4.68	-0.002704
		VN	TN	-1.89	-0.001089
		VH	TN	-4.89	-0.002820
	HCH	VL	TN	-0.52	-0.000298
		VN	TN	-1.30	-0.000739
		VH	TN	1.02	0.000582
16QAM	LCH	VL	TN	-1.85	-0.001081
		VN	TN	-1.95	-0.001142
		VH	TN	-1.78	-0.001038
	MCH	VL	TN	-3.04	-0.001757
		VN	TN	-3.88	-0.002241
		VH	TN	-3.11	-0.001795
	HCH	VL	TN	-1.12	-0.000639
		VN	TN	0.43	0.000246
		VH	TN	0.32	0.000180
Temperature					
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)
QPSK	LCH	VN	-30	0.42	0.000246
		VN	-20	-1.61	-0.000938
		VN	-10	-2.61	-0.001528
		VN	0	-3.37	-0.001972
		VN	10	-2.10	-0.001230
		VN	20	-4.36	-0.002551
		VN	30	-1.02	-0.000597
		VN	40	-0.18	-0.000105
		VN	50	1.47	0.000857
	MCH	VN	-30	-1.41	-0.000811
		VN	-20	-2.12	-0.001221
		VN	-10	-0.85	-0.000490
		VN	0	-2.09	-0.001206
		VN	10	-2.72	-0.001572
		VN	20	-2.35	-0.001358
		VN	30	-1.65	-0.000952
		VN	40	1.05	0.000605
		VN	50	1.04	0.000600
	HCH	VN	-30	0.64	0.000368
		VN	-20	-1.70	-0.000971
		VN	-10	-2.38	-0.001356
		VN	0	-1.44	-0.000819
		VN	10	-0.18	-0.000103
		VN	20	0.14	0.000080

		VN	30	-1.07	-0.000610
		VN	40	0.08	0.000044
		VN	50	0.85	0.000486
16QAM	LCH	VN	-30	-0.16	-0.000095
		VN	-20	-1.74	-0.001020
		VN	-10	-2.05	-0.001201
		VN	0	-3.51	-0.002050
		VN	10	-1.98	-0.001160
		VN	20	-4.13	-0.002411
		VN	30	-0.94	-0.000551
		VN	40	-0.22	-0.000127
		VN	50	1.11	0.000647
	MCH	VN	-30	-1.31	-0.000758
		VN	-20	-1.63	-0.000940
		VN	-10	-0.93	-0.000540
		VN	0	-2.36	-0.001363
		VN	10	-2.81	-0.001621
		VN	20	-2.80	-0.001617
		VN	30	-1.24	-0.000718
		VN	40	1.78	0.001025
		VN	50	0.68	0.000395
	HCH	VN	-30	-0.06	-0.000036
		VN	-20	-0.95	-0.000541
		VN	-10	-1.94	-0.001106
		VN	0	-1.01	-0.000574
		VN	10	-0.65	-0.000372
		VN	20	-0.71	-0.000406
		VN	30	-1.59	-0.000906
		VN	40	0.67	0.000379
		VN	50	0.41	0.000236

Channel Bandwidth: 3 MHz

Channel Bandwidth: 3 MHz					
Voltage					
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)
QPSK	LCH	VL	TN	-0.37	-0.000216
		VN	TN	-1.44	-0.000840
		VH	TN	-2.56	-0.001497
	MCH	VL	TN	-3.92	-0.002265
		VN	TN	-1.88	-0.001085
		VH	TN	-4.41	-0.002548
	HCH	VL	TN	-0.47	-0.000266
		VN	TN	-0.71	-0.000407
		VH	TN	0.45	0.000257
16QAM	LCH	VL	TN	-2.16	-0.001263
		VN	TN	-1.62	-0.000947
		VH	TN	-2.08	-0.001214
	MCH	VL	TN	-2.28	-0.001317
		VN	TN	-3.85	-0.002220

		VH	TN	-2.87	-0.001656
	HCH	VL	TN	-2.04	-0.001162
		VN	TN	0.43	0.000244
		VH	TN	0.05	0.000030
Temperature					
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)
QPSK	LCH	VN	-30	0.63	0.000368
		VN	-20	-1.81	-0.001059
		VN	-10	-2.05	-0.001198
		VN	0	-3.55	-0.002076
		VN	10	-1.39	-0.000813
		VN	20	-3.98	-0.002324
		VN	30	-0.53	-0.000312
		VN	40	0.11	0.000066
		VN	50	1.74	0.001015
	MCH	VN	-30	-1.32	-0.000760
		VN	-20	-1.56	-0.000900
		VN	-10	-1.55	-0.000897
		VN	0	-2.58	-0.001487
		VN	10	-2.20	-0.001269
		VN	20	-2.61	-0.001508
		VN	30	-0.89	-0.000514
		VN	40	1.04	0.000603
		VN	50	1.20	0.000695
	HCH	VN	-30	-0.04	-0.000023
		VN	-20	-0.98	-0.000556
		VN	-10	-2.40	-0.001368
		VN	0	-1.63	-0.000930
		VN	10	-0.05	-0.000031
		VN	20	-0.57	-0.000325
		VN	30	-0.93	-0.000530
		VN	40	0.37	0.000210
		VN	50	0.35	0.000200
QPSK	LCH	VN	-30	0.16	0.000096
		VN	-20	-1.77	-0.001034
		VN	-10	-2.62	-0.001529
		VN	0	-3.40	-0.001985
		VN	10	-1.93	-0.001129
		VN	20	-3.83	-0.002240
		VN	30	-1.06	-0.000622
		VN	40	-0.28	-0.000161
		VN	50	1.72	0.001003
	MCH	VN	-30	-1.70	-0.000984
		VN	-20	-2.17	-0.001250
		VN	-10	-1.12	-0.000646
		VN	0	-2.79	-0.001610
		VN	10	-2.80	-0.001613
		VN	20	-2.84	-0.001638
		VN	30	-1.03	-0.000594
		VN	40	1.22	0.000704

		VN	50	0.50	0.000288
	HCH	VN	-30	0.45	0.000257
		VN	-20	-1.46	-0.000830
		VN	-10	-2.61	-0.001491
		VN	0	-1.28	-0.000729
		VN	10	-0.77	-0.000438
		VN	20	-0.36	-0.000205
		VN	30	-1.03	-0.000588
		VN	40	0.76	0.000435
		VN	50	1.01	0.000576

Channel Bandwidth: 5 MHz

Channel Bandwidth: 5 MHz					
Voltage					
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)
QPSK	LCH	VL	TN	0.10	0.000056
		VN	TN	-2.18	-0.001273
		VH	TN	-2.59	-0.001512
	MCH	VL	TN	-4.75	-0.002741
		VN	TN	-2.53	-0.001458
		VH	TN	-4.86	-0.002804
	HCH	VL	TN	-1.10	-0.000627
		VN	TN	-0.74	-0.000423
		VH	TN	1.16	0.000663
16QAM	LCH	VL	TN	-1.91	-0.001117
		VN	TN	-1.79	-0.001044
		VH	TN	-2.30	-0.001344
	MCH	VL	TN	-2.80	-0.001614
		VN	TN	-3.59	-0.002070
		VH	TN	-2.31	-0.001332
	HCH	VL	TN	-1.23	-0.000700
		VN	TN	0.72	0.000413
		VH	TN	0.57	0.000324
Temperature					
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)
QPSK	LCH	VN	-30	-0.15	-0.000090
		VN	-20	-1.77	-0.001035
		VN	-10	-2.47	-0.001443
		VN	0	-3.40	-0.001985
		VN	10	-1.16	-0.000677
		VN	20	-3.97	-0.002321
		VN	30	-1.15	-0.000671
		VN	40	-0.05	-0.000029
		VN	50	1.58	0.000920
	MCH	VN	-30	-1.70	-0.000982
		VN	-20	-1.43	-0.000823
		VN	-10	-1.19	-0.000688
		VN	0	-2.60	-0.001502

		VN	10	-2.23	-0.001287
		VN	20	-2.98	-0.001720
		VN	30	-0.69	-0.000396
		VN	40	1.09	0.000631
		VN	50	1.40	0.000809
	HCH	VN	-30	0.09	0.000049
		VN	-20	-1.14	-0.000651
		VN	-10	-2.55	-0.001453
		VN	0	-1.07	-0.000610
		VN	10	-0.44	-0.000252
		VN	20	-0.70	-0.000399
		VN	30	-1.27	-0.000727
		VN	40	0.77	0.000439
		VN	50	0.93	0.000530
16QAM	LCH	VN	-30	0.36	0.000210
		VN	-20	-1.84	-0.001073
		VN	-10	-1.77	-0.001031
		VN	0	-3.63	-0.002117
		VN	10	-1.30	-0.000760
		VN	20	-4.11	-0.002403
		VN	30	-0.41	-0.000237
		VN	40	-0.31	-0.000181
		VN	50	1.73	0.001008
	MCH	VN	-30	-0.77	-0.000443
		VN	-20	-1.73	-0.000998
		VN	-10	-1.34	-0.000775
		VN	0	-2.33	-0.001346
		VN	10	-2.37	-0.001368
		VN	20	-2.42	-0.001398
		VN	30	-1.25	-0.000719
		VN	40	1.33	0.000766
		VN	50	0.99	0.000570
	HCH	VN	-30	0.47	0.000268
		VN	-20	-1.01	-0.000576
		VN	-10	-2.20	-0.001256
		VN	0	-1.68	-0.000961
		VN	10	-0.18	-0.000104
		VN	20	0.11	0.000062
		VN	30	-1.26	-0.000721
		VN	40	0.13	0.000073
		VN	50	1.13	0.000644

Channel Bandwidth: 10 MHz

Channel Bandwidth: 10 MHz					
Voltage					
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)
QPSK	LCH	VL	TN	-0.14	-0.000084
		VN	TN	-2.31	-0.001346
		VH	TN	-2.55	-0.001485
	MCH	VL	TN	-4.40	-0.002538
		VN	TN	-1.79	-0.001033
		VH	TN	-4.98	-0.002872
	HCH	VL	TN	-0.89	-0.000506
		VN	TN	-0.52	-0.000298
		VH	TN	0.82	0.000466
16QAM	LCH	VL	TN	-1.93	-0.001126
		VN	TN	-2.21	-0.001288
		VH	TN	-2.27	-0.001322
	MCH	VL	TN	-2.17	-0.001253
		VN	TN	-3.63	-0.002092
		VH	TN	-2.27	-0.001312
	HCH	VL	TN	-1.21	-0.000694
		VN	TN	0.11	0.000064
		VH	TN	-0.37	-0.000211
Temperature					
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)
16QAM	LCH	VN	-30	0.57	0.000333
		VN	-20	-1.77	-0.001034
		VN	-10	-2.60	-0.001515
		VN	0	-3.70	-0.002160
		VN	10	-1.62	-0.000942
		VN	20	-3.74	-0.002182
		VN	30	-0.41	-0.000240
		VN	40	0.10	0.000058
		VN	50	1.22	0.000711
	MCH	VN	-30	-1.63	-0.000938
		VN	-20	-2.03	-0.001170
		VN	-10	-1.33	-0.000766
		VN	0	-2.72	-0.001570
		VN	10	-2.86	-0.001653
		VN	20	-2.56	-0.001479
		VN	30	-1.43	-0.000824
		VN	40	1.24	0.000714
		VN	50	0.68	0.000394
	HCH	VN	-30	-0.21	-0.000119
		VN	-20	-1.18	-0.000676
		VN	-10	-2.70	-0.001545
		VN	0	-1.05	-0.000601
		VN	10	-0.36	-0.000208
		VN	20	-0.02	-0.000013

		VN	30	-1.68	-0.000958
		VN	40	0.92	0.000528
		VN	50	1.08	0.000619
QPSK	LCH	VN	-30	0.45	0.000263
		VN	-20	-1.62	-0.000942
		VN	-10	-2.64	-0.001537
		VN	0	-3.71	-0.002164
		VN	10	-1.69	-0.000987
		VN	20	-3.83	-0.002232
		VN	30	-0.68	-0.000394
		VN	40	-0.37	-0.000219
		VN	50	1.91	0.001114
	MCH	VN	-30	-0.98	-0.000568
		VN	-20	-1.49	-0.000861
		VN	-10	-1.23	-0.000709
		VN	0	-2.70	-0.001558
		VN	10	-3.09	-0.001782
		VN	20	-2.39	-0.001380
		VN	30	-1.00	-0.000576
		VN	40	1.07	0.000619
		VN	50	1.19	0.000685
	HCH	VN	-30	-0.28	-0.000162
		VN	-20	-1.86	-0.001061
		VN	-10	-2.14	-0.001226
		VN	0	-1.68	-0.000963
		VN	10	-0.76	-0.000434
		VN	20	-0.20	-0.000117
		VN	30	-0.75	-0.000429
		VN	40	0.35	0.000203
		VN	50	0.78	0.000444

Channel Bandwidth: 15 MHz

Channel Bandwidth: 15 MHz					
Voltage					
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)
QPSK	LCH	VL	TN	-0.10	-0.000056
		VN	TN	-1.71	-0.000997
		VH	TN	-2.74	-0.001593
	MCH	VL	TN	-4.31	-0.002489
		VN	TN	-2.62	-0.001514
		VH	TN	-4.71	-0.002717
	HCH	VL	TN	-0.65	-0.000371
		VN	TN	-0.65	-0.000369
		VH	TN	0.34	0.000196
16QAM	LCH	VL	TN	-1.54	-0.000894
		VN	TN	-1.68	-0.000976
		VH	TN	-1.66	-0.000968
	MCH	VL	TN	-2.60	-0.001503
		VN	TN	-3.03	-0.001747

		VH	TN	-2.84	-0.001638
	HCH	VL	TN	-1.25	-0.000715
		VN	TN	0.16	0.000089
		VH	TN	0.40	0.000229
Temperature					
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)
QPSK	LCH	VN	-30	0.57	0.000332
		VN	-20	-1.52	-0.000886
		VN	-10	-2.62	-0.001526
		VN	0	-3.39	-0.001971
		VN	10	-1.97	-0.001148
		VN	20	-3.80	-0.002213
		VN	30	-0.80	-0.000463
		VN	40	-0.11	-0.000062
		VN	50	1.13	0.000660
	MCH	VN	-30	-1.74	-0.001003
		VN	-20	-2.13	-0.001232
		VN	-10	-0.71	-0.000411
		VN	0	-2.92	-0.001684
		VN	10	-2.19	-0.001264
		VN	20	-2.25	-0.001298
		VN	30	-1.16	-0.000672
		VN	40	1.31	0.000756
		VN	50	0.95	0.000547
	HCH	VN	-30	0.61	0.000351
		VN	-20	-1.63	-0.000932
		VN	-10	-1.97	-0.001128
		VN	0	-0.96	-0.000547
		VN	10	-0.26	-0.000148
		VN	20	-0.52	-0.000297
		VN	30	-0.74	-0.000422
		VN	40	0.53	0.000302
		VN	50	0.95	0.000545
16QAM	LCH	VN	-30	0.37	0.000214
		VN	-20	-1.04	-0.000603
		VN	-10	-2.24	-0.001305
		VN	0	-4.14	-0.002410
		VN	10	-1.86	-0.001082
		VN	20	-3.72	-0.002168
		VN	30	-0.53	-0.000310
		VN	40	0.00	0.000002
		VN	50	1.04	0.000607
	MCH	VN	-30	-1.72	-0.000990
		VN	-20	-2.22	-0.001283
		VN	-10	-1.49	-0.000860
		VN	0	-2.11	-0.001217
		VN	10	-2.81	-0.001621
		VN	20	-2.79	-0.001613
		VN	30	-1.57	-0.000908
		VN	40	1.16	0.000672

		VN	50	0.65	0.000377
	HCH	VN	-30	0.08	0.000048
		VN	-20	-1.10	-0.000631
		VN	-10	-2.42	-0.001385
		VN	0	-0.83	-0.000477
		VN	10	-0.52	-0.000298
		VN	20	0.08	0.000045
		VN	30	-1.01	-0.000577
		VN	40	0.17	0.000098
		VN	50	0.59	0.000340

Channel Bandwidth: 20 MHz

Channel Bandwidth: 20 MHz					
Voltage					
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)
QPSK	LCH	VL	TN	0.01	0.000007
		VN	TN	-2.17	-0.001259
		VH	TN	-2.41	-0.001402
	MCH	VL	TN	-4.49	-0.002591
		VN	TN	-1.76	-0.001018
		VH	TN	-5.10	-0.002946
	HCH	VL	TN	-0.50	-0.000284
		VN	TN	-0.85	-0.000490
		VH	TN	0.37	0.000212
16QAM	LCH	VL	TN	-1.69	-0.000984
		VN	TN	-1.91	-0.001108
		VH	TN	-2.31	-0.001342
	MCH	VL	TN	-2.79	-0.001609
		VN	TN	-3.66	-0.002110
		VH	TN	-2.75	-0.001590
	HCH	VL	TN	-1.62	-0.000930
		VN	TN	0.85	0.000484
		VH	TN	-0.16	-0.000091
Temperature					
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)
QPSK	LCH	VN	-30	0.09	0.000050
		VN	-20	-1.61	-0.000935
		VN	-10	-2.49	-0.001446
		VN	0	-4.17	-0.002427
		VN	10	-1.68	-0.000978
		VN	20	-3.72	-0.002164
		VN	30	-0.38	-0.000219
		VN	40	-0.53	-0.000311
		VN	50	1.04	0.000606
	MCH	VN	-30	-1.14	-0.000656
		VN	-20	-1.38	-0.000798
		VN	-10	-1.08	-0.000623
		VN	0	-2.90	-0.001675

		VN	10	-2.66	-0.001534
		VN	20	-2.73	-0.001576
		VN	30	-1.13	-0.000652
		VN	40	0.85	0.000492
		VN	50	1.15	0.000665
	HCH	VN	-30	0.15	0.000085
		VN	-20	-1.64	-0.000942
		VN	-10	-2.63	-0.001507
		VN	0	-1.50	-0.000862
		VN	10	-0.20	-0.000112
		VN	20	-0.24	-0.000140
		VN	30	-0.94	-0.000539
		VN	40	0.18	0.000102
		VN	50	0.53	0.000302
16QAM	LCH	VN	-30	0.65	0.000377
		VN	-20	-1.29	-0.000748
		VN	-10	-2.14	-0.001243
		VN	0	-3.41	-0.001981
		VN	10	-1.57	-0.000912
		VN	20	-3.62	-0.002105
		VN	30	-0.23	-0.000134
		VN	40	-0.09	-0.000052
		VN	50	1.14	0.000660
	MCH	VN	-30	-1.52	-0.000878
		VN	-20	-1.72	-0.000993
		VN	-10	-1.59	-0.000915
		VN	0	-2.09	-0.001208
		VN	10	-2.18	-0.001259
		VN	20	-2.96	-0.001709
		VN	30	-0.77	-0.000442
		VN	40	0.85	0.000490
		VN	50	1.31	0.000755
	HCH	VN	-30	0.58	0.000332
		VN	-20	-1.32	-0.000755
		VN	-10	-2.04	-0.001170
		VN	0	-1.51	-0.000864
		VN	10	-0.24	-0.000135
		VN	20	-0.31	-0.000175
		VN	30	-1.43	-0.000817
		VN	40	0.14	0.000081
		VN	50	1.00	0.000570

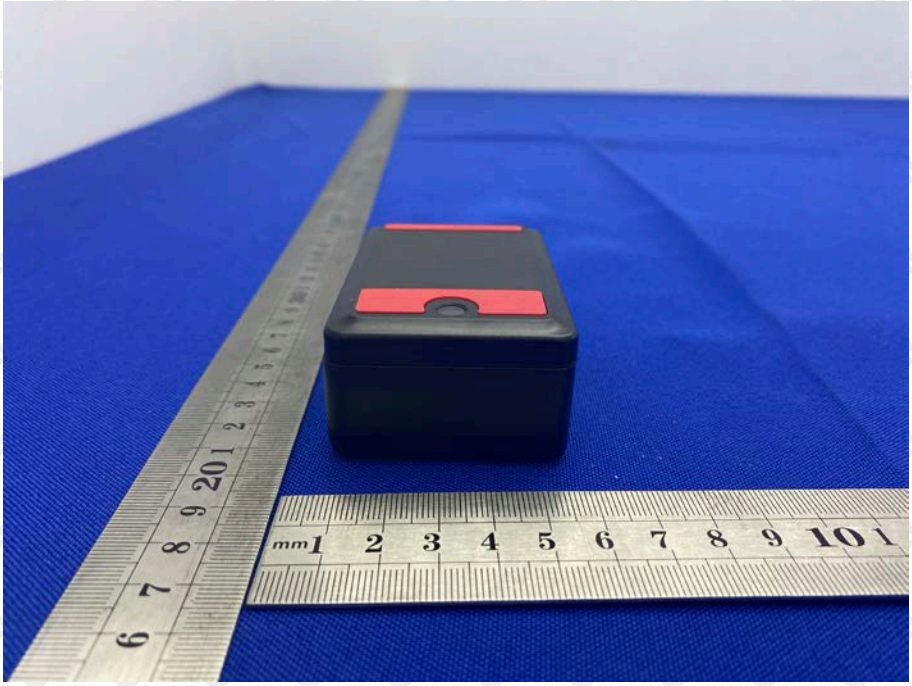
14. EUT PHOTOGRAPHS

NT06E

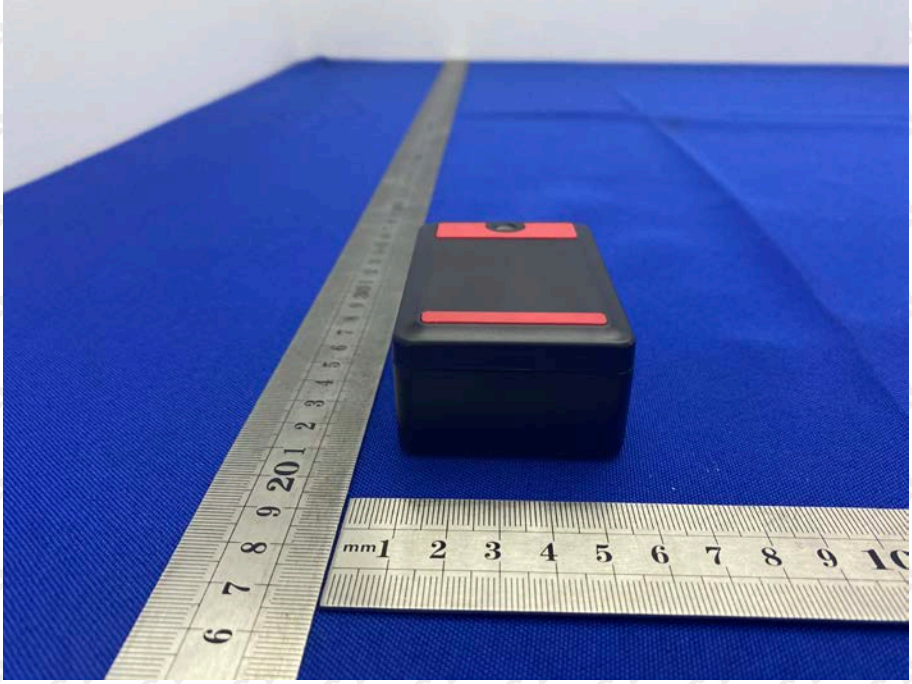
EUT Photo 1

EUT Photo 2

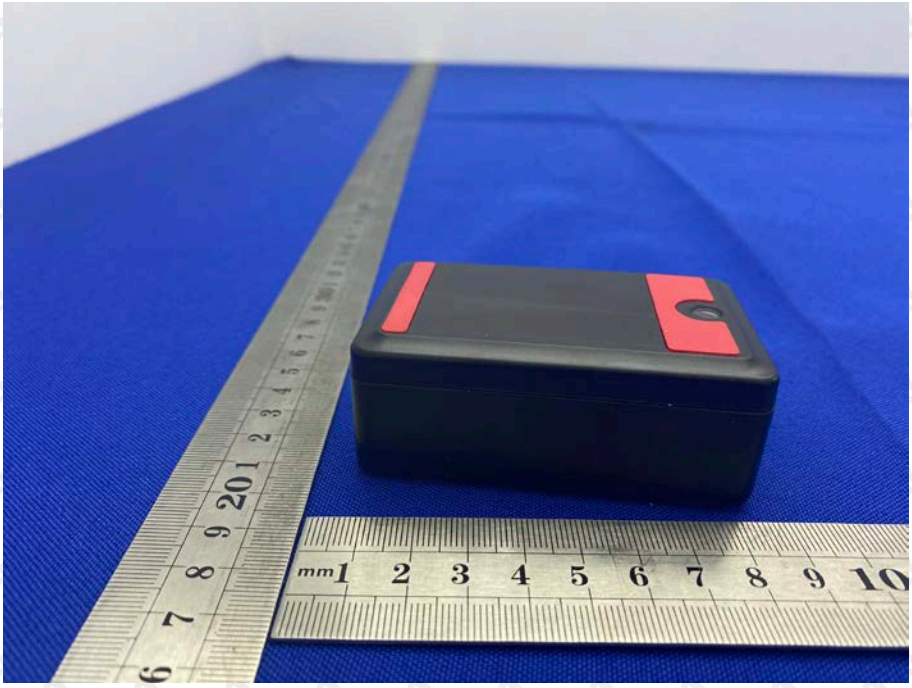
EUT Photo 3



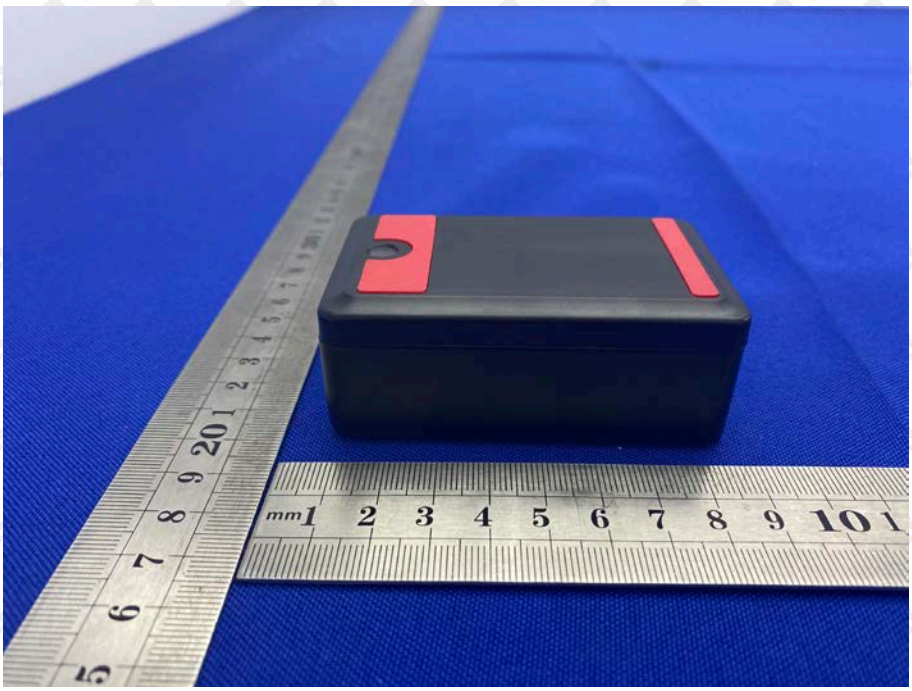
EUT Photo 4



EUT Photo 5



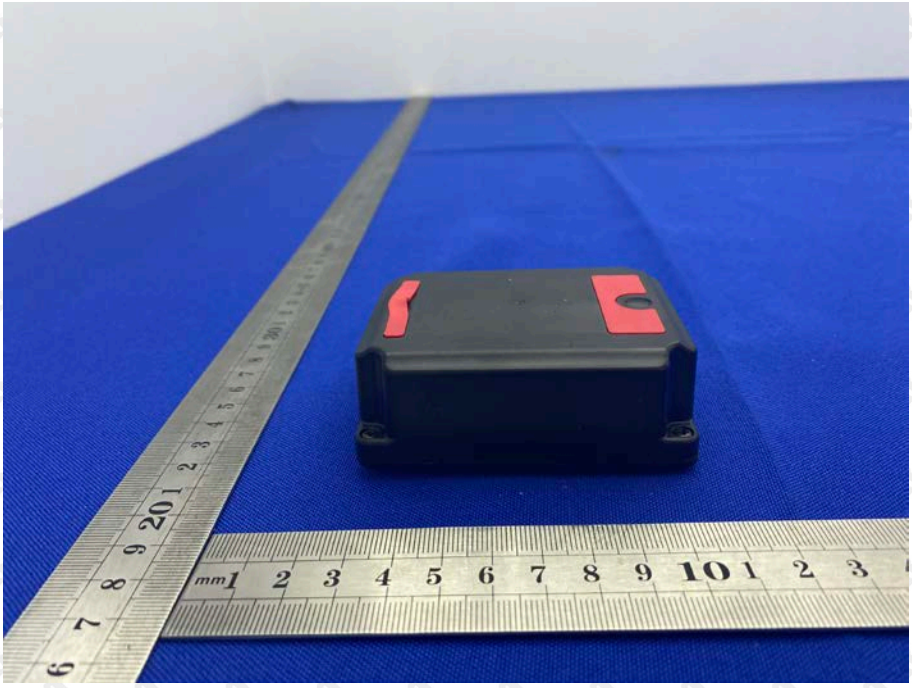
EUT Photo 6



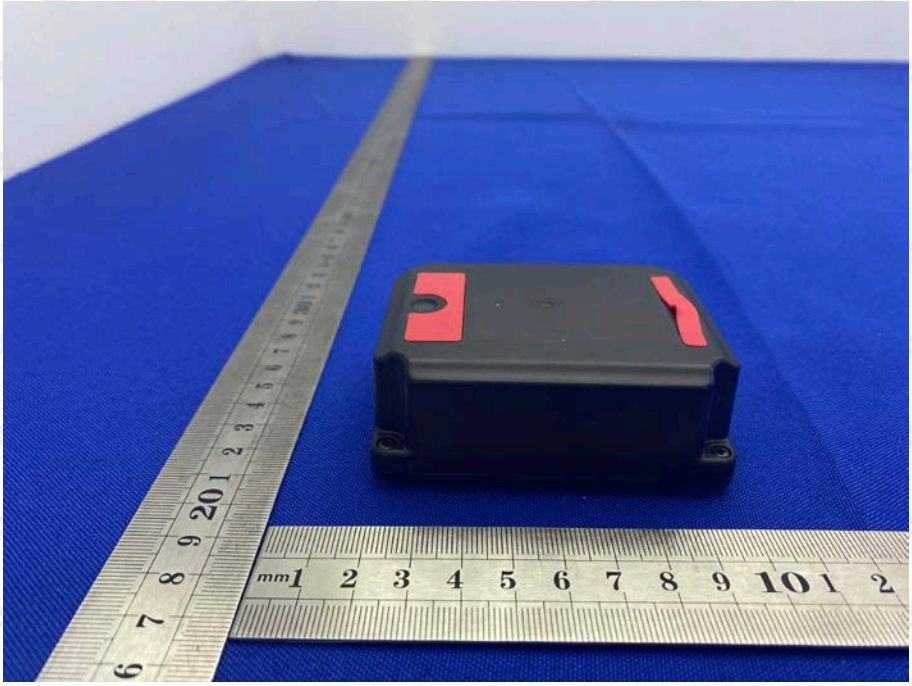
NT06EF
EUT Photo 1

EUT Photo 2

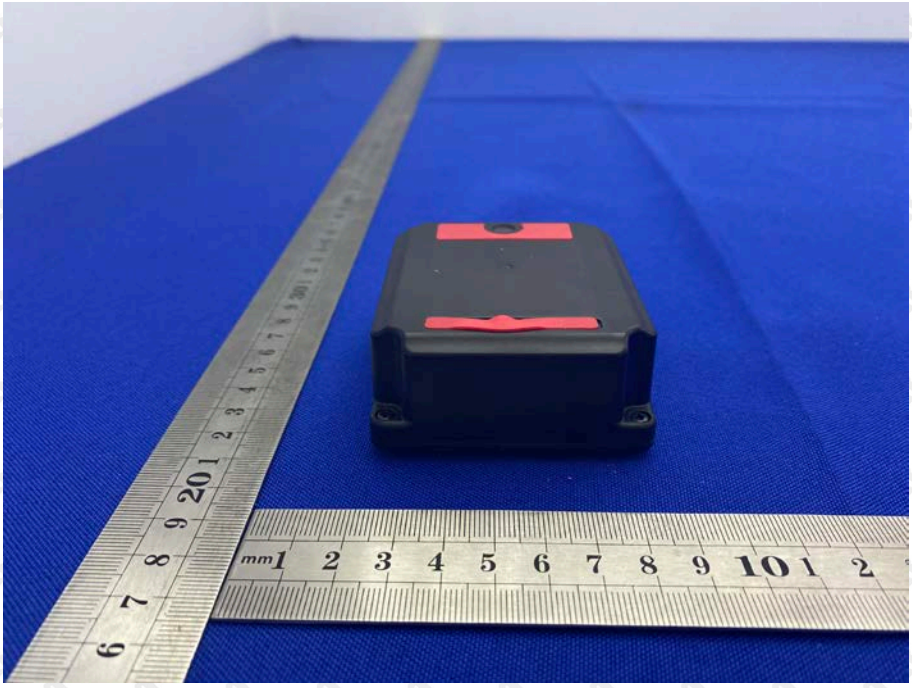
EUT Photo 3



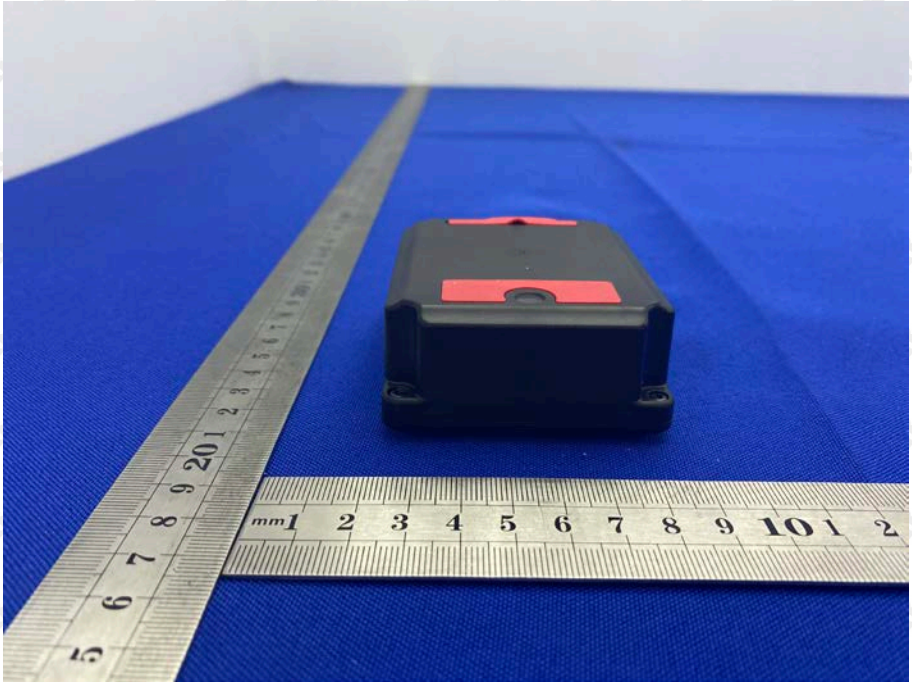
EUT Photo 4



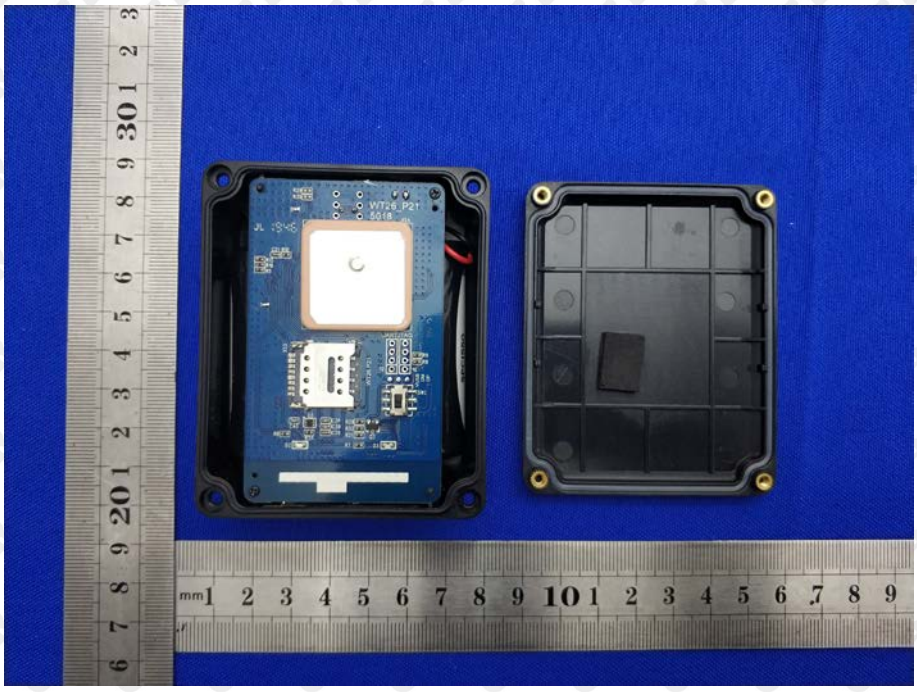
EUT Photo 5



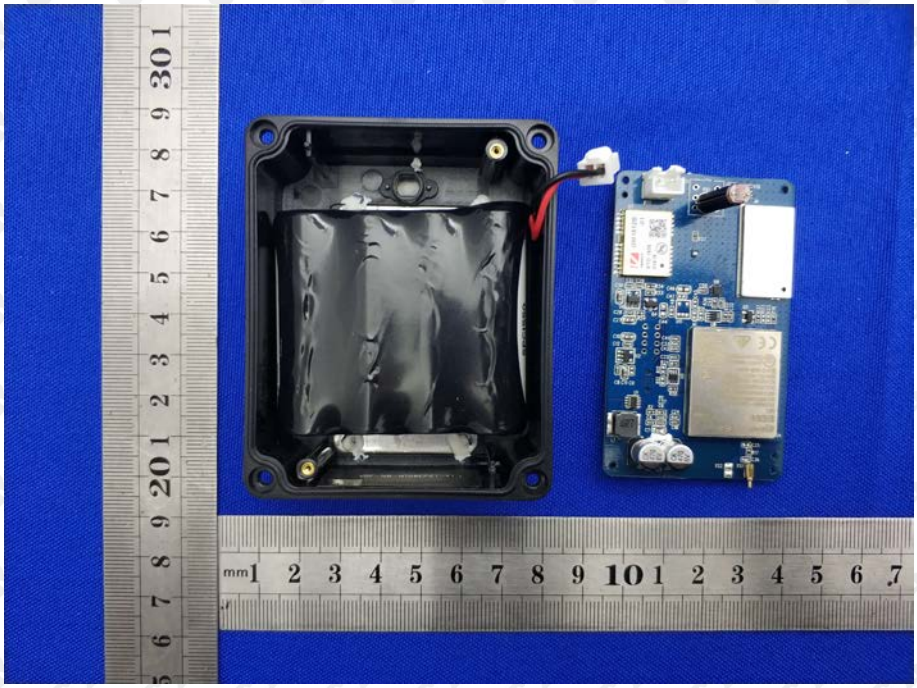
EUT Photo 6



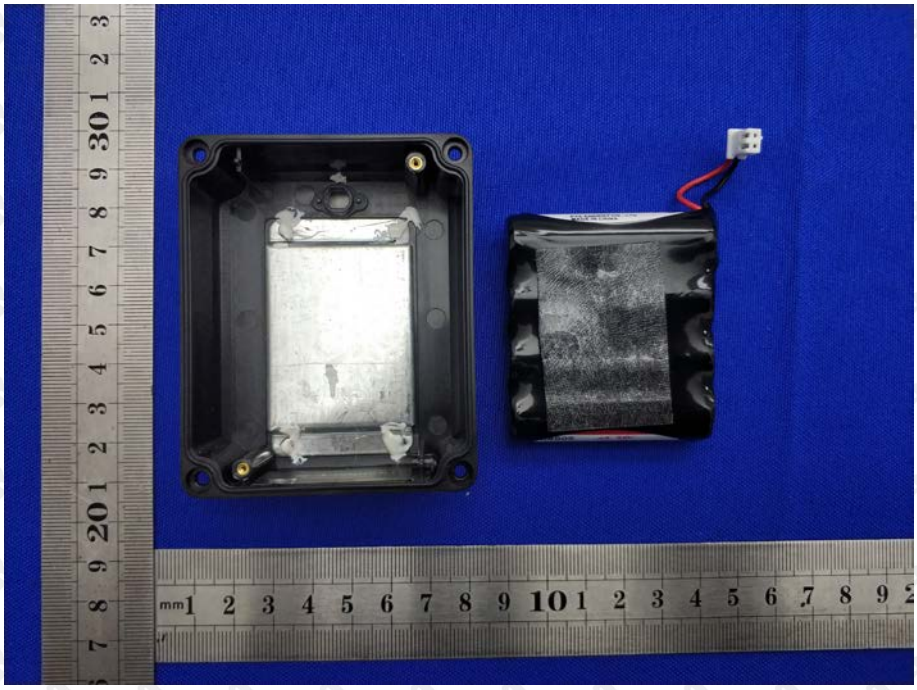
EUT Photo 7



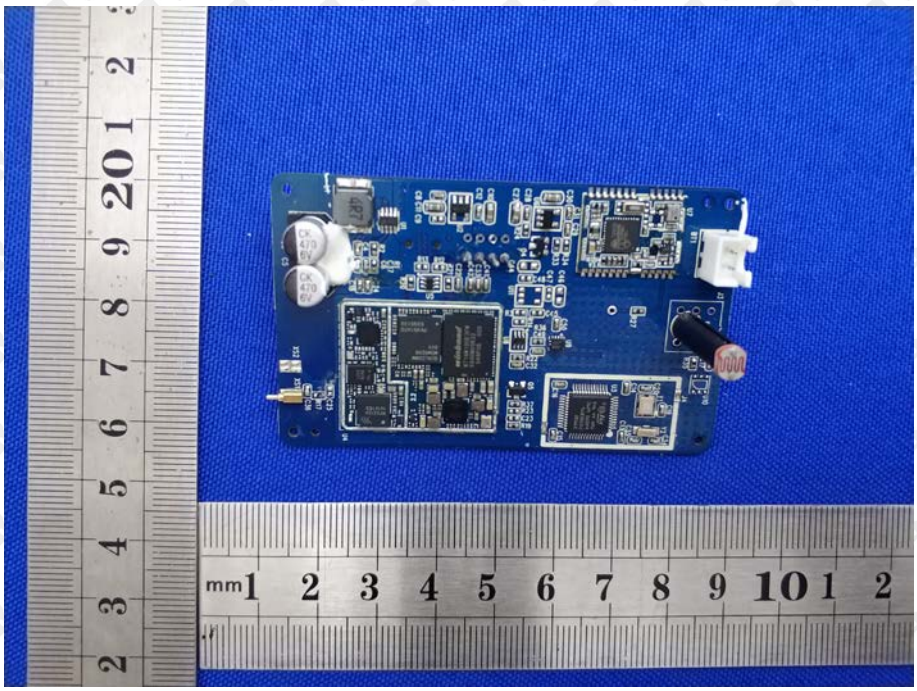
EUT Photo 8



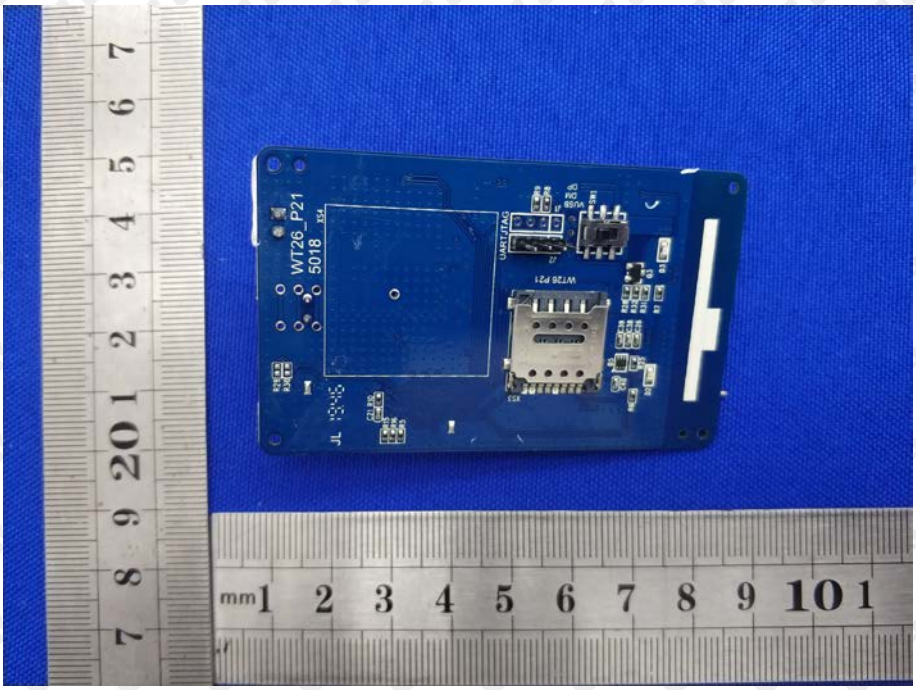
EUT Photo 9



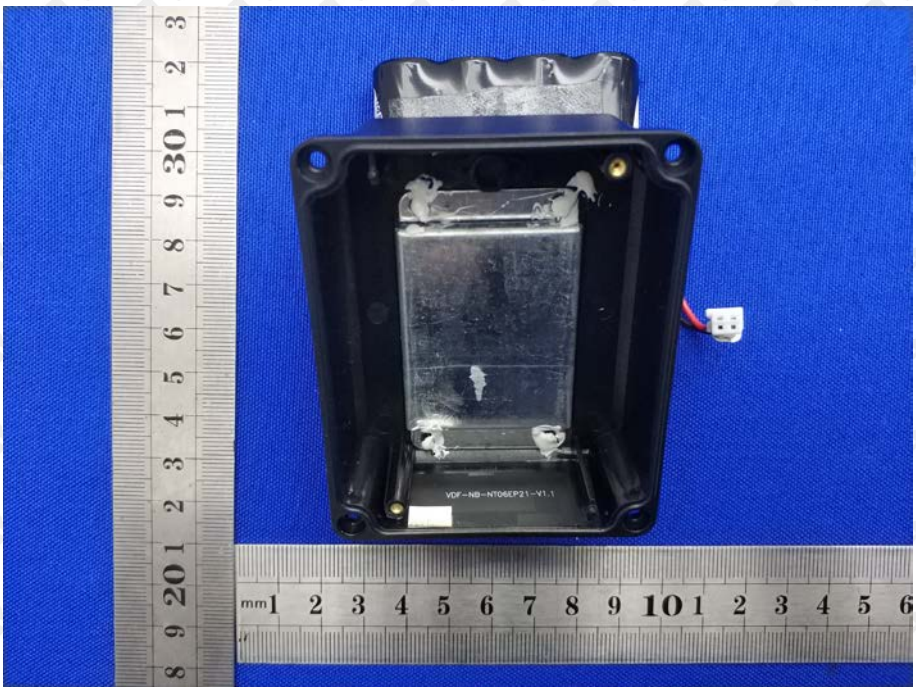
EUT Photo 10



EUT Photo 11



EUT Photo 12

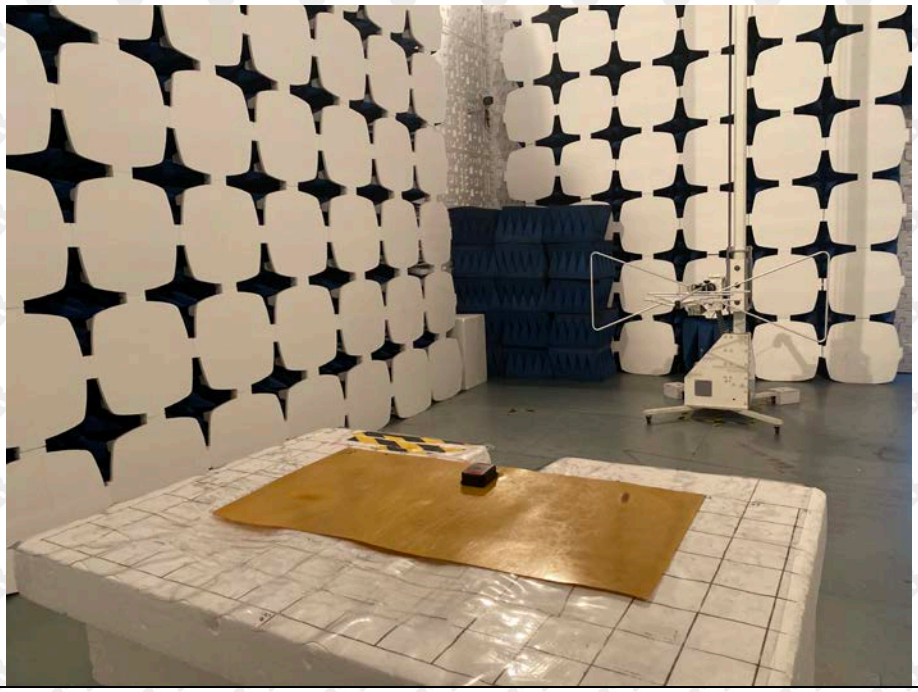


EUT Photo 13

15. EUT TEST SETUP PHOTOGRAPHS

Radiated Emission

Below 1G



Above 1G

※※※※※ END OF REPORT ※※※※※